Healthcare Workers' Perspectives on Working during the Covid-19 Pandemic: Moral Injury, Mental Health Difficulties, and Organisational Influence

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Impact of COVID-19

COVID-19 impacted on the data collection phase as in-person research interviews were not permitted under the Health Research Authority and University of Essex COVID-19 guidelines.

Abstract

Background: Healthcare workers' (HCWs) exposure to potentially morally injurious events (PMIEs) cannot be overlooked in the Covid-19 pandemic. Research suggests witnessing or enacting PMIEs can lead to psychological growth or development of moral injury (MI); the swing of the pendulum being dependant on the quality of support an individual receives before, during, and after the PMIE (Greenberg et al., 2020). MI has been linked to several detrimental mental health outcomes (Gupta & Sahoo, 2020).

Aims: This study aimed to explore how HCWs who experienced PMIEs made sense of their experiences, and whether this led to the experience of MI or psychological growth over the long term. A secondary aim was to explore whether experience of MI impacted on HCWs family and social life, as well as their emotional and psychological wellbeing over the long term. A final aim was to explore what organisational factors impacted on experiences of MI during the Covid-19 pandemic.

Method: A total of 15 HCWs from a range of clinical occupational backgrounds were recruited using purposive and snowballing sampling techniques. Participants worked in UK hospital settings during the Covid-19 pandemic. Individual semi-structured interviews were conducted via video-call. Data were transcribed and analysed using a qualitative reflexive thematic analysis (TA) method (Braun & Clarke, 2019).

Findings: The analysis produced six themes and 13 sub-themes. The overall themes were "perspectives on morally injurious events", "surviving pandemic pressures and morally injurious events", "the betrayal of the NHS", "betrayal by government", "managing moral injury", and "navigating post-pandemic life".

Conclusions: Several factors contributed to the experience of MI and psychological growth. A key factor was whether moral repair had been attempted by the employee's institution. This influenced employees' meaning making and decision to leave their role.

Keywords: Moral injury, healthcare workers, healthcare organisations, mental health

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Common and Frequently Used Acronyms

Table 1

Common and Frequently Used Acronyms

Acronym	Phrase or word related to abbreviation
MI	Moral Injury
PMIE	Potentially Morally Injurious Event
HCW	Health Care Worker
MIES	Moral Injury Events Scale
PTSD	Post-Traumatic Stress Disorder
CMD	Common Mental Disorders
GHQ	General Health Questionnaire
TA	Thematic Analysis

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1 Introduction

1.1 Chapter Summary

This chapter outlines the historical, theoretical, legal, clinical, and socio-political structures relevant to moral injury (MI) before considering healthcare workers' (HCWs) experiences of MI in the context of the Covid-19 pandemic. The latter part of the chapter will provide a systematic review of relevant literature considering HCWs' MI during the Covid-19 pandemic. The chapter concludes with an outline of the research aims and objectives.

1.2 Stress

The Health and Safety Executive of the UK government currently define occupational or work-related stress as "the adverse reaction people have to excessive pressures or other types of demand placed on them at work" (HSE, 2022). Definitions of occupational stress have evolved historically, leading to a conceptually confusing term which is sometimes used interchangeably with related constructs like burnout (British Association for Counselling and Psychotherapy, 2022). However, with a historical lens, common definitions of stress in organisational behaviour include a person-environment interaction between the characteristics of the individual and potential stressors in the work environment (Beehr & Newman, 1978; Cooper & Marshall, 1976; McGrath, 1976). Situations are seen to have potential for stress when their demands are perceived to exceed or threaten the worker's capabilities to meet those demands (McGrath, 1976). A limitation of the conceptual definitions and models of stress is that they identify stress as resulting from a lack of individual capabilities, resources, and attitudes, which places the burden of stress on the individual worker.

1.3 Burnout

Burnout is generally defined as a prolonged psychological response to chronic stressors in a job (Maslach & Leiter, 2008). Maslach & Leiter's (1997) theory proposes that burnout results from a mismatch between one's values and the nature and demand of one's job role.

They claim mismatch occurs when critical issues are left unresolved in a manner unacceptable to the worker. Burnout is thought to be characterised by three conceptually distinct but interrelated dimensions (Maslach & Leiter, 2008). The first, “emotional exhaustion” (EE), has been the most closely associated with burnout in the literature (Bakker et al., 2005; Lederer et al., 2008), and is characterised as “feeling emotionally drained and lacking the emotional energy necessary to provide the services required” (Epp, 2012, p. 26). The second dimension, “depersonalisation” (DP), is characterised by a worker’s negative perceptions of colleagues, including lack of compassion, insensitivity or cynicism (Khamisa et al., 2013). The third dimension, “lack of personal accomplishment” (PA) or inefficacy, relates to feelings of incompetence and lack of efficiency and productivity at work (Maslach & Leiter, 2008). Similar to conceptualisations of stress, a conceptual limitation of burnout is that it places the problem within the individual, who is viewed as deficient in some form (Dean et al., 2019). Consequently, the onus is on the individual to find and implement solutions to their burnout, perhaps by becoming more resilient or learning to cope with stressors (Montgomery et al., 2019).

1.4 Compassion Fatigue

In 1992, Carla Joinson first coined the term compassion fatigue to describe the loss of nurses’ ability to nurture. In healthcare settings, compassion fatigue is recognised as physical, emotional, and psychological exhaustion resulting from caring for sick or traumatized people over a prolonged period (Figley, 2002). This state of fatigue leads to diminished capacity to empathise and feel compassion for others and is sometimes referred to as compassion stress, secondary traumatic stress, or vicarious trauma. Figley (2002), who later adopted this term, preferred the term compassion fatigue to secondary traumatic stress or vicarious trauma, in the hopes that it would be less pathologizing, and open avenues of conversation and research around healthcare providers’ impairment. Though sometimes used interchangeably with burnout, it should be noted that burnout refers to a general exhaustion and lack of interest in one’s work, whereas compassion fatigue results specifically from absorbing the emotional burden of patients’ sickness or trauma.

When care failings are brought to light in the UK healthcare system, such as the events that led to the Winterbourne View (Lea, 2012) and the Robert Francis Report (Francis, 2015) among others, lack of staffs’ compassionate care and respect for dignity is highlighted, and everyone is quick to blame health professionals. As a result, the government amended the NHS constitution and values to emphasise compassion, dignity, and respect (GOV.UK, 2021; McPherson et al., 2016), and the NHS pushed for “compassionate care” through adopting “Values Based Recruitment” in the training and hiring of new practitioners, and provision of training to increase existing staffs’ levels of compassion (McPherson et al., 2016, p. 3). As if this were a new concept, and staff just need to obtain high enough levels of compassion. The research evidence, however, suggests that HCWs start their training with lots of compassion, but this dwindles through their training and early career (Maben et al., 2007; Shapiro, 2008). Indeed, staff often respond intuitively with compassion, but workplace barriers such as structural and interpersonal factors hinder their capacity for providing compassionate care (McPherson et al., 2016). These barriers call for a whole system approach to the provision of compassionate care (McPherson et al., 2016).

1.5 Morals

Morals, morality, or moral values, refer to a set of principles that differentiate intentions, decisions, and actions as “proper” and “right” (Long & Sedley, 1987), and permit people to live cooperatively in groups. Moral reasoning begins in childhood, and develops as an individual’s cognitive capacity increases (Kohlberg & Hersh, 1977; Piaget, 1948). Piaget's (1965) two-stage theory of moral development posits an initial "heteronomous phase", marked by blind adherence to rules imposed by authority figures such as parents and teachers. This phase involves viewing rules as permanent, irrespective of context, with proportionate punishment for rule violations. The subsequent "autonomous phase," beginning in middle childhood, shifts focus to individuals' intentions over consequences, allowing for rule-breaking under certain moral considerations. Building on Piaget's work, Kohlberg, (1973) proposed a three-level theory of moral development, with six stages, suggesting universal progression through these stages as individuals form beliefs about justice. The levels include "preconventional morality," driven by self-interest and rewards; "conventional morality," characterized by social approval, obedience to authority, and conformity; and "post-conventional morality," where behaviour aligns with social contract and universal ethics. Kohlberg acknowledged that achieving post-conventional stages of morality is rare, involving a shift from accepting social order to evaluating community formation processes. Critically, both theories primarily assessed moral reasoning through hypothetical dilemmas, which may not accurately reflect real-world moral behaviour. However, these theories are supported by cross-cultural studies and offer valuable frameworks for extensive research (Berryman et al., 2002; Gibbs et al., 2007; Snarey, 1985).

Moreover, moral relativists argue that morality is not fixed, and is socially and historically contingent; that is, morality evolves over time, across cultures and religions (Harman, 1978). For instance, same-sex relationships are agreed as morally acceptable in some cultures, but not in others – and in the same cultures where this is morally acceptable, this would not have been the case historically. Despite the constant evolution of acceptable morality, some morals arguably transcend culture and time. These morals are explained by natural law – a theory in philosophy and ethics which considers that human beings possess an intrinsic sense of right and wrong that govern our reasoning and behaviour. Stemming from

Plato and Aristotle, concepts of natural law suggest that our universal moral standards form the basis of a just society (Shellens, 1959). One theory of this type of morality is the "moral foundation theory", which proposes five basic moral foundations of harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity (Haidt & Graham, 2007). Under the harm/care foundation, societies have a general dislike of suffering and value kindness and compassion, and condemn cruelty and violence (Haidt & Graham, 2007) – a governing morality of modern healthcare systems (GOV.UK, 2021). In spite of this, the theorists noted that "compassion is not inevitable" and can be turned off by many forces (Haidt & Graham, 2007, p. 104).

1.6 Values

Values are fundamental beliefs that guide an individual's attitudes, motivations, and purposeful actions (Rokeach, 2008). Generally, people are predisposed to adopt the values that they are raised with in their familial, societal, and cultural settings (Boer & Boehnke, 2016). Value systems are prospective and prescriptive beliefs that form a deep-rooted, personal, and individual foundation for behaviour (Boer & Boehnke, 2016). These personal values concern a person's reflections about what is right and wrong and may or may not be considered moral (Rokeach, 2008). Cultural values on the other hand, concern widely held beliefs accepted by religions or societies; reflecting what is deemed important in each context (Hitlin & Piliavin, 2004). Values specify a relationship between an individual and a goal, in the sense that what one person values in a situation may not be what another person values given the same situation. Some values have intrinsic worth, such as love, and truth, where others, such as ambition, and responsibility, are instrumental as a means to an end (e.g., a promotion to gain higher pay or status; Boer & Boehnke, 2016). Still other values are considered sacred and act as moral imperatives. These sacred values will seldom be compromised, because they are viewed as rightful duties instead of factors that can be weighed in ethical decision-making, where a person can choose which value to prioritise in each situation (Boer & Boehnke, 2016). When our values are shared by many others in society, they become known as morals (Kohlberg & Hersh, 1977).

1.7 Ethics

Values are essential to ethics. Ethics is concerned with human behaviour, and the choice behind behaviours (Paul & Elder, 2019). Ethics evaluates our actions, and the values which underlie them, determining which values should be pursued (Paul & Elder, 2019). Ethics can be seen in codes of ethics in business and legal domains (Martinez, 2019). These are written in a more concrete manner than personal values or morals, as they set strict rules for employees and citizens. For instance, doctors are held legally accountable to a strict code of ethics under the Hippocratic Oath, which binds them to the rule “first do no harm” (Sokol, 2013, p. 1). The professional conduct of many healthcare employees is regulated by professional bodies who mandate ethical codes of practice (Gillon, 1994). This creates “high stakes” for HCWs who are continually expected to demonstrate the ethical principles and values set by their regulatory body. To not do so risks losing their career, as well as being publicly shamed by having their protected job titles and ability to practice removed.

Therefore, ethics are institutions’ attempts at regulating employee behaviour based on a shared moral code (Martinez, 2019). Violating ethics has the same consequence as breaking a rule, whilst violating one’s morals results in individual guilt and shame instead of organisational or societal consequence. Ethical dilemmas occur when an institutional set of ethics conflicts with one’s own moral values. Ethics and morality are quite similar and are both based on distinguishing the difference between “good and bad” and “right and wrong”. The slight difference in this is that whilst morality is something that is personal, ethics concerns standards of good and bad that are set in communities and social settings (Grannan, 2022), such as workplace institutions.

1.8 Moral Injury

Litz et al. (2009) defined potentially morally injurious events (PMIEs) as “perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations (p. 700). This definition was later expanded by Shay (2014) to include “a betrayal of what’s right by someone who holds legitimate authority in a high-stakes situation” (p. 183). Exposure to PMIEs may lead to a range of social, psychological, behavioural, biological, and spiritual consequences, which ultimately presents as severe distress and functional impairments known as moral injury (MI; Cartolovni et al., 2021). As such, MI may be experienced upon encountering PMIEs which involve a violation of our moral compass or conscience through acts of betrayal or transgression (Williamson et al., 2020). In addition to causing temporary distress, the morality component of MI produces internal dissonance from acting in a way that conflicts with moral beliefs, breaching our moral identity and inner self, resulting in long-standing consequences such as anxiety and social withdrawal. As such, MI is akin to an emotional wound, inflicted due to circumstances rooted in the witnessing of intense human suffering (Gibbons et al., 2013).

A recent systematic review of MI conceptualisations, found 12 different definitions of MI used throughout the literature (Richardson et al., 2020). The review concluded that although the definition provided by Litz and colleagues (2009) was the most frequently used, there still appears to be lack of conceptual clarity among researchers (Richardson et al., 2020). Despite this, the literature broadly separates MI into two sub-types. The first involves acts of commission and omission (this is also interchangeably labelled “perpetration-based MI” in the literature). Both relate to one’s own actions, where “commission” refers to behaving in a way that does not align with one’s moral values, and “omission” relates to one’s inaction and failure to do or prevent something (Litz et al., 2022, p. 2). This sub-type is typically linked to experiencing shame and guilt linked to one’s own behaviour. The second component of MI involves experiencing betrayal from the actions or inactions of others, and is linked to experiencing a violation of trust and anger (Litz et al., 2022).

1.9 Moral Sensitivity

Originating in the field of business, moral sensitivity (also known as moral awareness), is commonly understood as an ability to identify moral dilemmas and understand the moral consequences of decisions (Jordan, 2009; Schmocker et al., 2020; Shaub, 1989). This includes responsiveness to others’ needs and potential violation of professional standards and codes of conduct (Tanner & Christen, 2014). As such, moral sensitivity is a necessary precursor to moral decision-making, as without an initial understanding of a moral issue at stake, moral judgement and decision-making processes would not follow (Sparks & Hunt, 1998). Lützén and colleagues (1994) developed the Moral Sensitivity Test as an initial quantitative measure of psychiatric nurses’ moral sensitivity in practice. The Moral Sensitivity Questionnaire (Schmocker et al., 2020) has been developed more recently as a measure of moral sensitivity in business, using samples of managers, bankers, and employees of non-governmental organisations (NGOs). It is not known whether this measure can be applied to the moral sensitivity of HWCs in their clinical roles, as there are currently no studies that apply this to the healthcare context.

1.10 Moral Distress

Moral distress was originally defined as “when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action” (Jameton, 1984, p. 6). Jameton (1993) described moral distress in two stages, the first including “feelings of frustration, anger, and anxiety people experience when faced with institutional obstacles and conflict with others about values" (p. 544). The second phase he described as "the distress that people feel when they do not act upon their distress" (Jameton, 1993, p. 544). Wilkinson (1987) later expanded the definition of moral distress to include internal causes of distress, in addition to external causes such as institutional constraints – "the psychological disequilibrium and negative feeling state experienced when a person makes a moral decision but does not follow through by performing the moral behaviour indicated by that decision" (p. 16). The shift from the external to the internal causes of moral distress led theorists to further develop the term "moral sensitivity", redefining it as "a consequence of the effort to preserve moral integrity when the persons act against their moral convictions" (Corley, 2002. p. 645).

A recent revision of the conceptual definition of moral distress claimed moral distress to be "one or more negative self-directed emotions or attitudes that arise in response to one's perceived involvement in a situation that one perceives to be morally undesirable" (Campbell et al., 2016, p. 6). These revisions of moral distress introduce a degree of ambiguity and confusion, indicating that perhaps a new definition of moral distress is not needed but an adequate understanding of the nature of moral distress (Tigard, 2018). Tigard (2018) suggested that moral distress can be thought of as something negative and undesirable, presenting as a phobia or aversion, and as something desirable and useful, demonstrating the presence of moral sensitivity and values.

The recent Moral Distress Model (Morley et al., 2022) attempts to delineate the profile of moral distress, based on interviews conducted with UK NHS nurses, which were analysed using a feminist interpretive phenomenology. In this model, factors which impacted the moral events encountered and either mitigated or exacerbated the moral distressed experienced were termed "compounding factors" (Morley et al., 2022, p. 1315). Of these confounding factors, some were avoidable (e.g., poor communication), whilst others were deemed unavoidable (e.g., scarce resources). Morley and colleagues (2019) also considered these avoidable and unavoidable factors in the context of austerity practices. Once moral distress was experienced, the nurses indicated four response types: fight, withdraw, satisfactory resolution, and acquiesce (Morley et al., 2022). The researchers also suggested three ways by which moral distress might also be avoided altogether; having a lack of awareness, reaching a satisfactory resolution, and being fully withdrawn (Morley et al., 2022).

1.11 Comparison of Moral Injury & Moral Distress

Considering the summaries of MI and moral distress, we might assume that among their commonalities is an aspect of moral integrity, where both terms relate to our relationship with our moral value system. Secondly, they both share psychological consequences such as feelings of guilt, shame, blame, and powerlessness (Cartolovni et al., 2021). However, they differ in terms of the context in which they occur. MI emerges from PMIEs, where traumatic events and the immorality of actions are followed by internal moral conflict. On the other hand, moral distress occurs from moral conflict in morally distressing situations that is brought on by external constraints (situational, healthcare policies, legal documentation) or internal characteristics (moral sensitivity, sense of powerlessness, threatened moral values; Deschenes et al., 2020).

This suggests that whilst moral distress and MI share some mutual consequences that lead to functional impairments, they differ in the overall resulting consequences for the individual. Moral distress results in psychological disequilibrium and negative emotional states (self-blaming, self-criticising, depression, anxiety) which in the healthcare context can have a negative impact on patient care, resulting in reduced job satisfaction and burnout (Deschenes et al., 2020). MI creates an emotional wound, which is unique to those who bear witness to cruelty and human suffering. The main difference then seems to be that moral distress presents a situational problem due to either external or internal constraints, whilst MI results in long lasting change to an individual's sense of hope, trust, integrity, etc. As such, moral distress may be relatively easy to prevent, if the external constraints are removed, and the internal constraints are mitigated by increasing moral resilience, which may directly increase an individual's level of moral sensitivity and quality of care provision (Lachman, 2016; Rushton et al., 2016). MI on the other hand, will lead to long-term emotional scarring which brings about permanent numbness, impairment, and social isolation that, if treated in time, may lead to posttraumatic growth (Cartolovni et al., 2021). This is not to exclude the possibility that some cases of moral distress may turn into MI with time, suggesting that moral distress may be a prelude to MI in certain contexts.

The association between these two concepts certainly requires further investigation through empirical research, specifically in terms of when significant moral distress morphs into MI, with severe consequences. Despite three decades of observations and conceptualisations of moral distress, limited interventions have shown to be effective in mitigating its detrimental effects (Musto et al., 2015).

1.12 Moral Residue

Epstein and Hamric (2009) suggest that moral distress leaves a "moral residue", where over time, a person's feelings of distress gradually accumulate instead of returning to baseline after repeated experiences of moral distress. This is also known as the crescendo effect (Epstein & Hamric, 2009; Morley et al., 2022). This concept was originally suggested in the works of Williams and Atkinson (1965) and Marcus (1980) as signifying the experience of a true moral dilemma. Although there are no measures of moral residue, evidence from qualitative studies support the crescendo effect. For instance, Morley and colleagues' (2022) exploration of critical care nurse’s experiences suggested that morally distressing experiences have a cumulative effect, which contributed to staff turnover.

1.13 Moral Repair

Moral repair is defined as “successful integration of the moral violation into an intact, although more flexible, functional belief system” (Litz et al., 2009, p. 701). Litz et al. (2009) suggest moral repair is fostered through an individuals’ accommodation of morally violating events as specific (i.e., context dependant), not constant (i.e., time limited), and external (e.g., a result of unprecedented demands). Moral repair may be preventative as well as reparative, and aims to re-establish trust, hope, and moral equilibrium within individuals and between people (Shale, 2020). When individuals experience anger or resentment resulting from acts of betrayal from others, a form of “moral address” is required to restore breached normative expectations (Shale, 2020, p. 2). Importantly, Shale (2020) highlights that resentment and anger do not automatically follow in the wake of PMIEs, but rather when expectations of truthfulness, respect, and meaningful remedial action are not met. Therefore, it is not the initial betrayal, but the violated expectations about what comprises an adequate response to the harm, that disrupts moral repair (Shale, 2020). The antidote to the betrayal is therefore the acknowledgement of the harm caused, deep listening, altered understanding, and mutually agreed reparative action that is meaningful to those harmed (Shale, 2020).

1.14 Moral & Psychological Resilience

Resilience is a broad concept, applied in multiple fields of research, and can be moral (Lachman, 2016), psychological (Bonanno & Diminich, 2013), physiological, genetic (Szanton & Gill, 2009), sociological (Adger, 2000), organisational, or communal (Masten, 2014). Moral resilience has been defined as “the ability to deal with an ethically adverse situation without lasting effects of moral distress and moral residue” (Lachman, 2016, p. 123). A similar definition by Rushton (2017), defined moral resilience as “the ability to respond positively to the distress and adversity caused by an ethically complex situation" (p. s11). Similarly, the notion of psychological resilience has been defined as "the creation of meaning in life, even life that is sometimes painful or absurd, and having the courage to live fully despite its inherent pain and futility" (Bartone, 2006, p. s137). Although there exists no unifying definition of either moral or psychological resilience, there is general reference to the ability to recover from or adapt to adversity, challenges, stress, or trauma (Rushton, 2017).

In the era of positive psychology, the concept of moral resilience is relatively recent and came from observations of moral distress as a potential catalyst for positive outcomes (Lützén & Kvist, 2013, 2012; Rushton et al., 2013). Even so, few studies thus far highlight positive outcomes from the experience of moral distress. For instance, a review on narratives of moral distress found only two out of 21 narratives highlighting positive growth (Rushton et al., 2013). Recent narratives in the healthcare literature suggest that although clinicians recognise their moral distress, their associated feelings of hopelessness and disempowerment may inadvertently contribute to a culture which undermines clinicians' potential for psychological growth and moral resilience (Johnstone & Hutchinson, 2015).

The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003), and its variations (i.e. CD-RISC-10; Campbell-Sills & Stein, 2007; CD-RISC2; Vaishnavi et al., 2007) was operationalised as a measure of psychological resilience. The Rushton Moral Resilience Scale (RMRS; Heinze et al., 2021) was further created as a measure specific to moral resilience, with good convergent validity with the CD-RISC-10 (Campbell-Sills & Stein, 2007; Heinze et al., 2021) and criterion validity with the Maslach Burnout Inventory – Human Services Survey (Heinze et al., 2021; Maslach et al., 1997). Preliminary quantitative research using the RMRS suggests that moral resilience is a promising individual resource that moderates the detrimental impact of MI (Rushton et al., 2022). Despite limited support for the role of moral resilience in mitigating the negative consequences of moral distress, there remains a dearth of literature on moral resilience in addition to the lack of conceptual clarity. Therefore, more research is needed to conceptually refine the definitions and differences between moral and psychological resilience and understand how these concepts are useful in diminishing the negative consequences of moral adversities such as moral distress and MI.

1.15 Moral Injury & PTSD

Although MI and PTSD often co-occur, they are currently recognised as two distinct constructs. The overlap between MI and PTSD includes both beginning with an event that is life threatening or harmful to self or others. In PTSD, this activating event is the individual’s experience of trauma; in MI this is any situation that goes against one’s values (i.e., a PMIE). Core features of MI, which are also symptoms of PTSD, include negative thoughts about self and others, in addition to intense feelings of guilt and shame (Talbot & Dean, 2018). Betrayal and loss of trust experienced with MI are also common features of PTSD.

However, MI and PTSD differ in that PTSD includes additional symptoms such as fear-based physiological arousal, that are not central to the development of MI (Talbot & Dean, 2018). Additionally, although core feature of MI overlap with symptoms of PTSD, it is possible to have MI and not meet criteria for PTSD. PTSD is a diagnosable mental health condition based on inaccurate fear appraisals following life-threatening events and subsequent avoidance behaviours (Litz et al., 2016). MI on the other hand, is not currently a diagnosable condition (Bryan et al., 2018), but may be an important prelude to the development of diagnosable mental health conditions such as PTSD and depression (Lamb et al., 2021). Furthermore, distress from PMIEs can lead to different symptom profiles to distress from traumatic events that elicit a fear-based reaction. For instance, (Litz et al., 2018) found that commission-based events (where someone performs an act outside of one's values) were associated with more re-experiencing, guilt, and self-blame than were life threatening traumatic events.

1.16 Moral Injury in Military Populations

In 1994, American Psychiatrist Jonathan Shay introduced the concept of MI in response to what he had observed in his clinical work with Vietnam War veterans. Shay observed that PTSD, the psychiatric diagnosis most frequently associated with veterans, did not adequately describe some of the experiences common to this group (Shay, 1994). Whilst PTSD provided an explanation of fear-based consequences to traumatic experiences, such as flashbacks, it failed to conceptualise veterans' distress that was not rooted in fear and anxiety, but in moral emotions of shame, guilt, and anger (Kubany & Manke, 1995; Tangney et al., 1996). Shay's (2003) concept of MI encapsulates distress experienced by military servicemen where the object under threat was not the lives of themselves of their comrades, but rather their sense of right and wrong. In Shay's (2003) definition, accountability for the moral violation rests with others holding "legitimate authority" such as commanding officers, not with the individual whose sense of morality is wounded (Hodgson & Carey, 2017).

Most of the existing literature which tries to understand MI has been conducted with US military servicemen and veterans, as the nature of war and combat creates PMIEs where soldiers have experiences that contradict the values they live by in civilian life (Hollis et al., 2022). For instance, PMIEs in war and combat contexts may including the killing or maiming of others, making decisions that affect the survival of others, medics not being able to care for all who are harmed, freezing or failing to perform a duty during a dangerous or traumatic event (e.g. falling asleep on patrol), failing to report events that violate rules or ethics, engaging in or witnessing acts of disproportionate violence and feeling nothing or exhilaration while causing harm to or killing others (Hollis et al., 2022).

Recent literature considers the moderating role of self-compassion in veterans' experiences of PMIEs and subsequent psychological distress. In a study on 216 army and navy veterans, a moderated mediation model found self-compassion had a significant unconditional direct effect on depression (Manalo, 2019). Levels of self-compassion played a role in PMIE's effect on depression via moral emotions (i.e. guilt and shame; Manalo, 2019). For instance, where medium to high levels of self-compassion were present, veterans presented reduced depressive symptoms through experiencing reduced guilt. The findings indicate that self-compassion may be a resilience factor for MI related guilt and shame, and were consistent with broader literature considering the role of self-compassion in attenuating states of psychological distress in veterans (e.g., Arimitsu & Hofmann, 2015; Kelley et al., 2019). Collectively these research findings evidence support for self-compassion theory, which outlines six components of self-compassion, separated into protective (i.e., self-kindness, common humanity, and mindfulness) and risk (i.e., self-judgement, isolation, and overidentification) factors (Neff, 2023). As such, MI related psychological distress (e.g., depression), is likely to benefit from bolstering self-compassion, via a reduction of moral emotions such as guilt and shame (Manalo, 2019).

Despite most research on MI being concerned with the MI of military personnel, MI has been applied to the context of several types of traumatic events (Griffin et al., 2019). For example, studies indicate MI among civilians and law enforcement officers who experienced community violence (Papazoglou et al., 2020; Williamson et al., 2018). MI in HCWs is also thought to occur at times when clinicians must make decisions related to life and death triage or resource allocation, or when they believe they should have been able to save a patient's life but were unable to do so (Campbell et al., 2016; Greenberg et al., 2020). MI can further develop when a HCW must care for others whilst experiencing a threat to their own life, such as during combat, a disaster, or during a pandemic (Hollis et al., 2022). During health crises, HCWs may witness what they perceive to be unfair acts or policies from their institutions that may lead to a sense of betrayal (Hollis et al., 2022).

A recent study compared the prevalence of betrayal-based and commission-based MI in US veterans in the context of their military service, with HCWs in the context of their experiences during the Covid-19 pandemic (William, 2022). The study found overall prevalence rates of potential MI to be similar across the samples, with 46% of veterans, and 51% of HWCs indicating being troubled by other-induced immoral behaviour, and 24% of veterans and 18% of HWCs reporting self-induced potential MI (William, 2022).

But is the transfer of the concept of MI from a military combat context to a healthcare context justified? At a conceptual level, one can argue that the essence of the moral violation that occurs in veterans is substantially different to that experienced by HCWs. In battle, soldiers must perpetrate and witness acts of harming or killing others, in stark contrast to the universal moral of killing as a bad and immoral act. That is, soldiers must take an active role, or be part of an institution which takes human life, whereas in the case of HCW MI, clinicians’ main objective is to save human life – life which they did not endanger in the first instance. This major difference suggests that the notion of MI may not be directly transferable from a military context to a healthcare one.

1.17 Moral Injury in Healthcare Workers

Over the last fifteen years, MI in HCWs has attracted growing research attention, as wider social and economic factors place pressure on healthcare systems to deliver optimal care to a growing population (UK.GOV, 2022) with shrinking resources (Maynard, 2017; Warner, 2022). Even before the pandemic, HCWs; a group of people motivated to their careers by a desire to help people, where increasingly required to consider a range of factors in addition to patient's best interests when deciding on treatment (Talbot & Dean, 2018). MI in healthcare is described as "the challenge of simultaneously knowing the care that a patient needs, but being unable to provide it due to constraints beyond the clinician's control" (Dean et al., 2019, p. 401). Dean and colleagues (2019) describe MI to be a result of ever-present double binds in the healthcare system: financial considerations of hospitals, insurers, and patients; electronic health records which distract from patient care but track productivity metrics; and litigation drives which cause clinicians to over-test and overreact to results. All these factors ultimately deduct from the quality of patient contact and fragment care (Talbot & Dean, 2018). This failure to meet patients' needs has an impact on clinician's wellbeing and is the core of MI. For instance, evidence suggests doctors experience high levels of work stress, even under normal circumstances, and most are reluctant to disclose mental health difficulties or to seek formal support for them, with stigma often reported as the reason (Galbraith et al., 2021).

However, not all who experience PMIEs develop MI. Clinicians operating within Kohlberg's (1973) conventional stages of morality may adhere better to institutional procedures which pose as PMIEs, potentially experiencing less psychological distress and subsequent MI. Conversely, those with post-conventional moral reasoning may resist practices perceived as undemocratic or conflicting with universal moral principles, possibly leading to psychological distress, greater likelihood of MI, and resistance against mandated care practices. Despite its plausibility, it is difficult to reliably gauge clinicians' level of moral development and related experiences of psychological distress and MI, due to the abstract nature of moral development theories (Kohlberg, 1973; Piaget, 1965).

For most individuals that are faced with challenges, whether moral or traumatic, there can be a degree of psychological growth based on meaning making of the experience, which bolsters the individual's psychological resilience (Greenberg et al., 2020). Whether a person develops MI or psychological growth is dependent on how they are supported before, during, and after the PMIE (Greenberg et al., 2020). To develop an understanding of how to protect the psychological health of HCWs from MI and secondary mental health difficulties; we first need to understand what factors impact their development of MI and the way in which they make sense of their experiences. This starting point lends itself to qualitative analysis, particularly to understand the profile of PMIEs and MI in the role of HCWs.

Recent attempts at measuring MI among US HCWs led to the development of the Moral Injury Symptom Scale – Healthcare Professionals (MISS-HP; Mantri et al., 2020). The scale was shown to be a reliable and valid measure of MI symptoms in healthcare professionals which could be used to screen for MI and monitor treatment response in clinical practice (Mantri et al., 2020). Preliminary research from the US using this measure has found a prevalence of 23.9% MI symptoms which caused at least moderate functional impairment (Mantri et al., 2021). Factors identified to correlate with MI symptoms were younger age, committing medical errors, shorter time in clinical practice, no religious affiliation/lower religiosity, greater depressive or anxiety symptoms, and greater clinician burnout (Mantri et al., 2021).

1.18 Moral Injury in Healthcare Workers During Pandemics

On a global scale, we need only look at recent epidemics of the Ebola and SARS viruses (the first coronavirus epidemic), and the H1NI influenza (Swine Flu) pandemic to know that by nature of being on the frontline, HCWs mortality rates are higher than civilian populations during disease outbreaks. The 2014-2016 Ebola virus outbreak in West Africa caused at least

11,000 fatalities, many of whom were HCWs (Cipriano, 2018). By May 2015, 0.02% of Guinea's population had died to Ebola, compared to 1.45% of the country's doctors, midwives, and nurses (Evans et al., 2015). The statistics in Liberia and Sierra Leone were even more bleak, with 0.11% and 0.06% of the general population killed by Ebola in comparison to 8.07% and 6.85% of HCWs respectively (Evans et al., 2015). Similarly, in the SARS epidemic of 2003, 20% of confirmed cases globally were HWCs, who also made up 43% of cases in Canada (Branswell, 2013). Whilst HCWs are arguably most at risk of death during disease outbreaks, evidence suggests that their mortality rates could be lower given adequate protection, staffing, training, resources, and support (Evans et al., 2015).

Research on the psychological impact of these past disease outbreaks on the well-being of HCWs has highlighted that many HCWs presented with frequent anxiety regarding their health and their families' health, higher levels of psychological distress, and fears of stigmatisation (Bai et al., 2004; Cheong et al., 2007; Tam et al., 2004; Wong et al., 2005). Literature on the SARS outbreak highlighted that HCWs psychological distress was associated with higher job stress, health fears, and social isolation (Maunder et al., 2004; Styra et al., 2008). Physical and emotional exhaustion resulting from an overstretched healthcare system (Koh et al., 2003), fast changing policies and procedures (Maunder et al., 2004), media and public scrutiny (Maunder, 2004), lifestyle affected by the disease outbreak (Nickell et al., 2004), and personal vulnerability (Tam et al., 2004; Wong et al., 2005), were also factors associated with HCWs psychological distress during the SARS epidemic. The literature also suggests that when faced with the Swine Flu pandemic, a significant proportion of HCWs chose not to go into work, despite having a strong sense of duty (Damery et al., 2009; Ives et al., 2009; Martinese et al., 2009; Wicker et al., 2009).

Given the extensive psychological consequences of previous epidemics and pandemics, the recent Covid-19 pandemic presents a context to shed new insight on the experience of PMIEs among HCWs. These experiences may bring about the effects of MI, as many may find themselves unable to contextualise, justify, or accommodate their actions, or that of others. This global crisis will have invariably had a strong impact on HCWs from many perspectives, including psychological, emotional, financial, physical, and interpersonal. As such, the focus is turned on MI among HWCs during the Covid-19 pandemic.

1.19 Moral Injury in Healthcare Workers During the Covid-19 Pandemic

HWCs often work long hours in emotionally salient environments and "high-stakes situations". This cannot be truer than in the Covid-19 pandemic which began in early 2020, where a scarce supply of resources such as oxygen tanks and staff shortages meant that doctors had to "play God" and make difficult decisions about prioritising healthcare for those deemed most likely to recover. By presenting HCWs with decisions that may require them to sacrifice a sacred value (e.g. "do no harm"), the experiences faced in the treatment of Covid-19 patients during the pandemic represent a transgression of one's values and thus manifest as a PMIE (Shortland et al., 2020). This occurs in instances where HCWs could not provide treatments as they were trained and expected to give, and therefore contravened on their values by not being able to act in a manner to prevent harm to patients.

A thematic analysis (TA) of 54 NHS doctors', nurses', and physiotherapists' accounts of their work experiences during the pandemic identified several themes where a central component was the experience and psychological consequences of trauma. Identified themes consisted of "the shock of the virus", "staff sacrifice and dedication", "collateral damage ranging from personal health concerns to the long-term impact on, and care of, discharged patients", and "a hierarchy of power and inequality within the healthcare system" (Bennett et al., 2020). A systematic review conducted after the first wave of the pandemic found that rates of anxiety and depression were higher in nursing staff, in comparison to other HCWs (Pappa et al., 2020). A US study found the prevalence of clinically significant MI to be 32.4% among HCWs, with nurses reporting the highest occurrence (Rushton et al., 2022). The experience of MI was significantly related to participants' moral resilience score (measured using the shortened RMRS; Heinze et al., 2021), ethical concerns score (measured using an Ethical Concerns Index; Rushton et al., 2022), religious affiliation, and having ≥20 years in their profession, where moral resilience moderated the effect of years of experience on MI (Rushton et al., 2022).

The results of these studies, taken in conjunction, suggest that the pandemic has not impacted the role of all clinicians across all specialities the same way, or to the same extent. Several specialities, such as GPs and physiotherapists, experienced a reduced workload during the pandemic, due to cancellation of routine practice and elective surgeries (Cheng & Sin, 2020). This prevented patients from transmitting the virus when attending clinics and hospitals, and released bed capacity for Covid-19 patients (Cheng & Sin, 2020). Such departments are likely to feel the pressure of Covid-19 differently when they are eventually faced with the back log of patient care.

Others have been impacted through deployment to Covid-19 wards; for instance in the case of some 20% of doctors who reported being deployed to work in a different area during the second wave of the pandemic (Royal College of Physicians, 2021). This was highest in the East of England where 25% of doctors reported deployment (Royal College of Physicians, 2021), potentially due to the higher ageing population who were at greater risk from contracting Covid-19. Redeployment of staff meant that there was high degree of cross-over in duties

(Vindrola-Padros et al., 2020), and arguably a loss of distinction between professional roles, where everyone was putting "hands on deck" to support patient care. This may have brought about new challenges in a variety of HCWs' interactions with traditional hierarchies, leading to a confusing mix of professional hierarchies, with some peoples' skills potentially being underused, and others being forced to work outside of their competencies. The NHS also saw some retired doctors and nurses return to work (Dyer, 2020), in addition to others who had moved into research and non-clinical roles (Cram et al., 2020). Again, it is of note that these "return to work" individuals would likely have had a different experience of the pandemic.

Therefore, it is important to note that the development of MI is most likely to be prevalent in a range of clinicians working with Covid-19 patients in hospital settings, such as doctors, nurses, support workers, healthcare assistants, anaesthesiologists, physiotherapists, paramedics, and radiographers. This experience may have led HCWs to enact, or bear witness to, difficult "high stake" decisions made regarding patient care. Furthermore, HCWs who continued to work on the front line of care on an ongoing basis during the pandemic (from March 2020 until February 2022), may be more likely to suffer with MI and secondary difficulties. This is due to the ongoing pressure to provide high-quality care, potentially without sufficient time or support to rest and recharge. Statistics from a Royal College of Physicians (2021) survey support this; citing that 19% of doctors had reported seeking informal mental health support and 10% had sought formal mental health support from their employer or GP.

To learn about the prevalence and experience of PMIEs, MI, and secondary difficulties in HCWs during the Covid-19 pandemic, a systematic review will be conducted to review the existing knowledge base.

2 Systematic Review

2.1 Background

There is a growing evidence base for experiences of MI in HWCs; notably, the Covid-19 pandemic led to an increase in research into HCW MI all around the world (Riedel et al., 2022), as healthcare systems across the globe scrambled to manage the demands placed on them by this unprecedented illness. By their occupational nature, HCWs share many commonalities in their roles, including routine exposure to morally challenging situations, and having to make difficult decisions regarding patient care. Even prior to the pandemic, clinician burnout and compassion fatigue was a concern, with evidence suggesting that HCWs in the UK have elevated rates of burnout compared to HCWs from Europe (Aiken et al., 2014). This may be as a result of the government's de-investment in the NHS and staffing over the last 10-15 years (The King's Fund, 2022). Besides these apparent differences in HCWs' experiences pre-pandemic, the pandemic brought about unique differences between different nations' policies and practices, both at the government and healthcare institution level. In the UK, NHS staff have expressed a myriad of factors felt to constitute to MI. These include deployed staff having to work outside their specialities and level of competency, risking infecting patients or turning them away due to lack of PPE, having to choose between allocating beds to Covid patients or patients with other urgent needs (Best, 2021), and the cancellation of routine care leading to an exacerbation in illness for many treatable conditions (Dobbs et al., 2021). Best (2021) describes other UK specific factors, such as HCWs feeling undermined by policies that led to increases in Covid infection rates including the government's subsidised Eat Out to Help Out scheme which encouraged people to dine out to boost the economy. NHS staff further felt betrayed by the 1% pay rise in 2022 following years of pay freeze, despite staff putting their lives, and the lives of their families, at risk to continue working during the pandemic (Best, 2021). Thus, the following systematic review aims to provide answers to the question: How prevalent was MI among HCWs in the UK and how did HCWs experience MI in the context of the Covid-19 pandemic?

2.2 Method

2.2.1 Inclusion and Exclusion Criteria

Papers were included if they recruited HCWs in their sample, or if their sample consisted of a HCW majority, such that information could be gleaned from the HCW proportion of their sample. The definition of HCW for this review was taken to be clinicians who directly provided care services to the physically or mentally unwell. Primary research studies investigating MI in UK HWCs were included whereas studies researching MI in HCWs internationally were excluded. Furthermore, only studies investigating MI in UK HCWs during the Covid-19 pandemic were included. This was to understand the impact of the additional moral dilemmas present during pandemic times. Studies investigating the following areas were considered: the prevalence of MI in HCWs during the pandemic, the association between experience of MI and related concepts (e.g., compassion fatigue), association between MI and secondary difficulties (e.g., depression), HCWs perceptions on factors leading to MI, HCWs perceptions on systemic/institutional factors impacting MI, HCWs perceptions on how to prevent MI, or create moral repair.

Peer-reviewed research was included in the review, in addition to pre-print research. Pre-print articles was considered for inclusion to capture newly emerging research that has not yet undergone peer-review, on this very recent phenomenon. Commentaries and editorials were excluded as it was not possible to compare these with primary research in a coherent way. Secondary research, theoretical reviews, intervention studies and studies on MI-related concepts, without mention of MI, were also excluded. Studies not written in English were excluded, however by nature of the geographical focus of the study criteria, this did not present as a barrier.

2.2.2 Study Design

Qualitative, quantitative, and mixed-methods studies were all considered in the review to capture all the evidence gathered so far. This enabled the review of important quantitative components of MI, such as its prevalence during the pandemic, as well as a qualitative understanding of how HWCs experienced their work, and what they believed to be causal to their MI. Table 2 denotes the full inclusion and exclusion criteria applied to the literature search.

Table 2. Inclusion and exclusion criteria for systematic review

Inclusion Criteria	Exclusion Criteria
• Studies published in English • Primary research studies • Peer-reviewed & pre-print studies • Quantitative, qualitative, or mixed-methods research • Studies on prevalence of MI in UK HCWs during the Covid-19 era. • Studies on associations between MI and related concepts or secondary difficulties in UK HCWs during the Covid-19 era. • Studies exploring UK HCWs' experience of MI during the Covid-19 era.	• Studies not in English • Secondary research (e.g., systematic reviews, meta-analyses) • Commentaries/Editorials • Intervention studies • Theory-based review articles • Studies on MI-related concepts (e.g., burnout, stress, moral distress)

2.3 Search Methods

2.3.1 Search Strategy

An electronic search of the following databases was conducted on 3.12.22 and 17.07.23: PsycARTICLES, PsycINFO, CINAHL Complete, Medline, and Embase. These databases were selected as they contain relevant medical and social sciences literature, including psychological literature. The electronic search was conducted a second time to include any relevant emerging literature since the initial search. Search terms were categorised under the headings of “healthcare worker”, “moral injury” and “Covid-19 pandemic” as follows:

1) Healthcare Workers

(“Healthcare” OR “health care” OR “staff” OR “professional*” OR “nurs*” OR “doctor*” OR “physician” OR “physiotherap*” OR “occupational therap*” OR “support worker*” OR “healthcare assistant*” OR “support staff” OR “psychiatrist” OR “critical care worker*” OR “critical care staff” OR “midwife*” OR “psychologist” OR therap* OR “anaesthesiologist*”) OR (“care” AND “worker*”)

2) Moral Injury

(“Moral” AND “injur*”) OR (“distress” OR “stress” OR “damag*” OR “suffering”)

3) Covid-19 Pandemic

(“Covid-19” OR “Coronavirus 19” OR “SARS-CoV-2” OR “nCoV 2019” OR “2019nCov” OR “HCoV-19” OR “2019 novel Coronavirus” OR “severe acute respiratory syndrome coronavirus 2”)

2.3.2 Study Selection

An initial total of 1818 studies were identified from the combination of databases stated. Once duplicates were removed, a total of 1117 articles remained. Titles and abstracts were screened against the inclusion and exclusion criteria, as outlined in Table 2. This process identified an initial 15 studies for full-text review. Forwards and backwards reference searches were also conducted to scan reference lists for missed articles. Google Scholar, and relevant review studies were also manually searched to this end. One new article was obtained from backwards reference searching. A further article was obtained from Google Scholar. This resulted in a total of 17 studies for full-text review. Of the initial 15 studies, 4 met the eligibility criteria, totalling 6 studies that were included in the review. The PRISMA diagram below depicts the selection process (Page et al., 2021; see Figure 1).

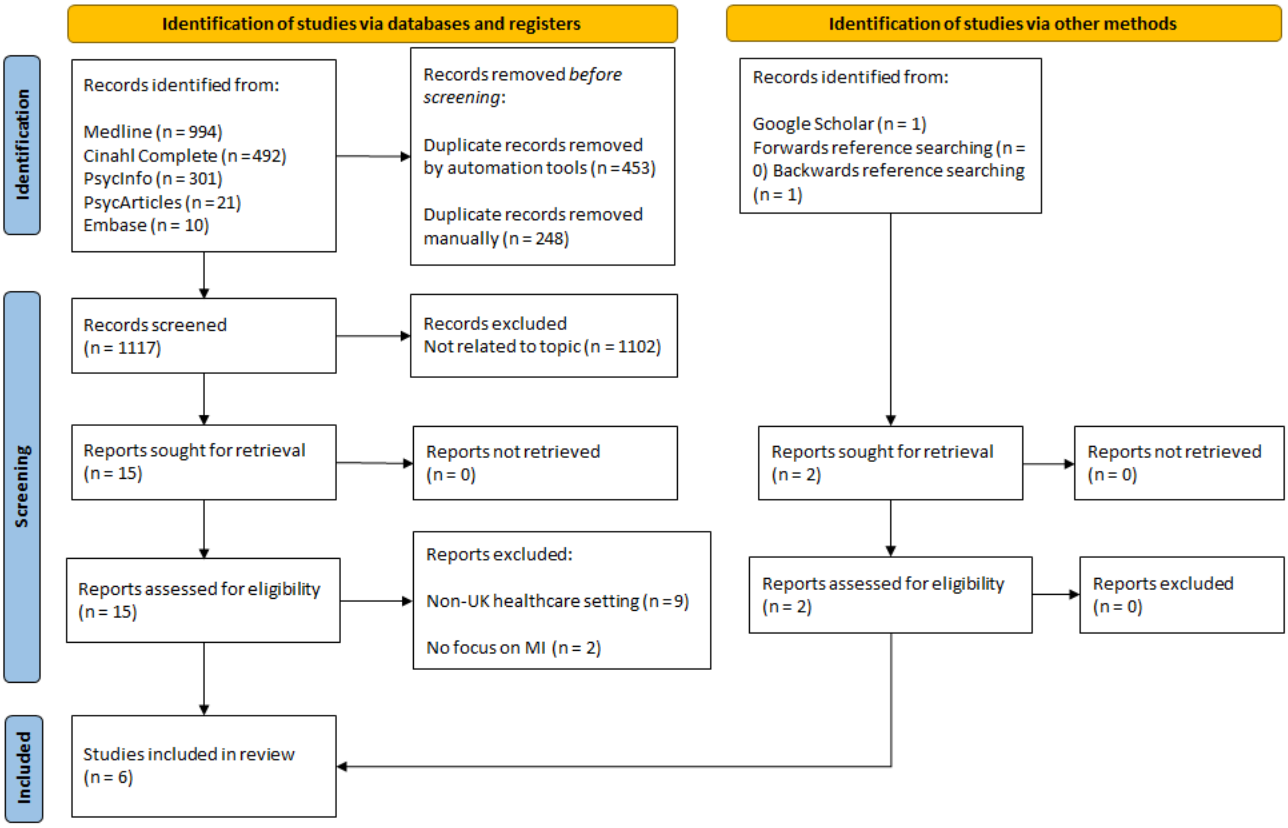

Figure 1. PRISMA flow diagram depicting the literature selection process through application of inclusion and exclusion criteria.

2.3.3 Quality Appraisal

The Critical Appraisal Skills Programme (CASP, 2018) research checklists were utilised to appraise the quality of the qualitative studies in this review, using the qualitative studies checklist, as well as the cohort study included, using the quantitative cohort studies checklist. As the CASP tools do not contain a checklist for survey studies, the survey study included in the review was quality checked against Oxford University's validated Centre for Evidence-Based Medicine (CEBM, n.d.) critical appraisal tool for survey studies.

An advantage of using these quality rating tools is that they highlight several key areas of research to assess by, making them exhaustive tools. The CASP tool does this particularly well through highlighting key questions the evaluator should be looking to answer from the research to answer each of the ten questions. The CEBM survey appraisal tool does not contain these prompt questions to consider under each of its twelve key appraisal questions. A limitation of both CASP and CEBM appraisal tools is the limited categorical nature of response items, making it difficult to establish if a study meets a criterion by classifying using "yes", "no", or "can't tell" responses.

Critical appraisal of the four qualitative studies identified all four to be of sound quality. All four studies clearly stated their research aims, with appropriate qualitative methodologies in the interest of exploring clinicians' lived experience. Research design, recruitment strategy, and data collection methods were appropriately described in the studies, with ethical approval obtained in all the studies. However, all four studies lacked more detailed consideration of ethical issues, insofar as the research writeup. The researcher-participant relationship was only clearly outlined in one study (Hegarty et al., 2022) who described their reflexivity process. It was not clear why the other studies missed this. Data analysis was thorough in all four studies and the findings were clearly reported. All four studies discussed the wider implications of their findings and made valuable recommendations for the direction of future research (please see Appendix A for CASP qualitative research appraisal table).

Critical appraisal of the quantitative cohort study identified the study to be of high methodological quality. The paper (Lamb et al., 2021) had a clear focus and aim, and recruited their cohort in an acceptable, and ethically considered way. Both exposure and outcome measures were objective and validated to minimise bias. Potential confounds were considered and accounted for in the research design and analysis. It was unclear if the follow-up period of the cohort was sufficient, as the paper was only reporting on the initial baseline data, collected at time 1. Confidence intervals were provided for the analysis results, which suggested that higher exposure to MI was strongly associated with higher levels of probable common mental disorders (CMDs). The results appeared believable and applicable to UK HCWs more broadly. The results were discussed in the context of existing findings, and wider implications of the results was provided (please see Appendix B for CASP quantitative cohort study table; the results column is not reported on to avoid duplication, as these are reported on in Table 3).

Critical appraisal of the quantitative survey study suggested the study to be of high methodological quality (Williamson et al., 2022). The study stated clear aims with a research design appropriate to address them. It further outlined a clear participant selection method, with no evidence of selection bias. However, the study authors did not report power calculations to determine minimum sample size, and it was not clear why this was the case. The study considered and accounted for confounds in its analysis, and its results appeared applicable to UK HCWs more widely (please see Appendix C for CEBM survey appraisal table).

2.3.4 Summary

Findings from qualitative and quantitative components of the included studies were considered separately. Thematic synthesis (Thomas & Harden, 2008) was applied to the qualitative studies to synthesise the data. Based on the principles of TA, thematic synthesis can be used to synthesise data from all qualitative methods (Thomas & Harden, 2008). However, this approach seemed particularly suited as three of the four qualitative studies utilised the TA method. The thematic synthesis included an inductive three-step process, starting with line-by-line coding of text, where findings from the primary studies were entered verbatim into NVIVO qualitative analysis software and coded for meaning and content. The "data" used for synthesis was taken to be all text under the results section of the studies, which included primary authors' summaries and contextualisation of the raw data. Each sentence had at least one code applied, although many were classified using multiple codes in this early stage. This step was followed by development of descriptive themes which included translation of concepts from one study to another and grouping of codes according to similarities and differences. This stage developed the range of conceptual variability within the studies as well as identifying contradictory findings. The final stage involved the generation of analytic themes that went beyond the content of the original studies, to communicate key messages from the research collective.

A descriptive summary of findings from the quantitative studies in the review will also be provided, as lack of overlap in study measures meant it was not possible to meaningfully amalgamate the statistical results.

2.4 Results

Table 3 lists key characteristics of all studies considered in the review. In the qualitative studies, six main themes were identified, and are discussed below. Quotes from author's interpretations are provided, in keeping with recommendations on reporting qualitative research syntheses (Sandelowski & Barroso, 2002; Thomas & Harden, 2008). Key findings from the quantitative research are provided in the latter parts of this section.

Table 3

Study Characteristics

Study	*Sample*	*Area of Interest*	*Data Collection Method*	*Data Collection Period*	*Measures Used*	*Analysis Method*	*Main Findings*
Denham et al. (2023)	20 NHS Staff (15 Female, 17 While British, 1 Asian, 2 Other Ethnic Group, mean age: 17)	Experiences of MI and distress across physical and mental healthcare services.	Semi-structured interviews (telephone and video)	May-July 2021	Interview topic guide developed by authors	Qualitative reflexive TA using a critical realist lens.	Three themes were developed: attitudes towards MI, experiences of PMIEs, consequences of MI. Most PMIEs were betrayal-based and included loss of trust.
French et al. (2022)	16 NHS Staff (12 Female, 15 White British, 1 Asian Indian)	Experiences of burnout and betrayal-based MI, incidences of PMIEs, and impact of leadership.	Online semi-structured video interviews	Not stated	Interview topic guide developed by authors	Qualitative reflexive TA using a critical realist lens.	Three themes were developed: abandonment as betrayal; dishonesty and lack of accountability; and fractured relationships to management or the NHS. Self-identified "burnout" may include a significant moral component.
Hegarty et al. (2022)	30 NHS Staff (20 Female, 18 White British, 6 Asian, 2 Black, 3 Mixed, 1 Other)	Impact of PMIEs on HCWs wellbeing, and HCWs beliefs about organisational practices that influence outcomes following PMIEs.	Data from NHS CHECK cross-sectional self-report survey Online semi-structured video interviews	Nov-Dec 2021	PHQ-9, GAD-7, MIES, PCL-6 (pre-requisite for inclusion)	Qualitative reflexive TA using a critical realist lens.	Five themes were developed: Ill-equipped and under-supported to respond to crisis, feeling unable to fulfil one's duty of care to patients, avoiding moral dissonance, psychological toll of PMIEs, and adaptively managing moral distress.
Lamb et al. (2021)	4378 NHS clinical and ancillary staff	Prevalence and factors associated	Data from NHS CHECK cross-	April-June 2020	GHQ-12, GAD-7, PHQ-9, AUDIT,	Quantitative multivariable	Analyses showed substantial levels of probable CMDs (58.9%) and PTSD (30.2%),

Study	*Sample*	*Area of Interest*	*Data Collection Method*	*Data Collection Period*	*Measures Used*	*Analysis Method*	*Main Findings*
	(75% Female; mean age: 41; 53% White British, 20% Black British, 17% Asian British, 4% Mixed Race, 5% Other)	with CMDs and MI outcomes of NHS workers during the early pandemic.	sectional self-report survey		PCL-6, MIES, CIS-R	binary logistic regression	with lower levels of depression (27.3%), anxiety (23.2%) and alcohol misuse (10.5%). Women, younger staff, and nurses tended to have poorer outcomes.
Liberati et al. (2021)	35 NHS Staff from community and inpatient services (19 Female; 24 White British, 3 Asian, 2 Mixed Ethnicity, 1 Other Ethnic Group, 5 Not Stated)	Challenges faced by clinicians working in mental health settings during the first wave of the pandemic.	Semi-structured interview (21 telephone, 14 video)	June-Aug 2020	Interview topic guide developed by authors	Qualitative constant comparison method based on a grounded theory approach.	MI linked to participants' perceived failures in providing the quality of care they felt service users needed. Some sought to compensate for deficits in care, but this led to further personal strain. Problems were compounded by systemic issues.
Williamson et al. (2022)	12,965 clinical and non-clinical NHS Staff (77% Female, 82% White British, mean age: 43 years)	Experience and impact of PMIEs and MI-related mental health difficulties.	Data from NHS CHECK cross-sectional survey	Not stated	MIES, PCL-6, GHQ-12, GAD-7, PHQ-9, AUDIT, BAT-12	Quantitative multi-level logistic regression	PMIEs were significantly associated with adverse mental health symptoms. Specific work factors significantly associated with MI (e.g., being redeployed, lack of PPE, having a colleague die of Covid-19).

Instrument abbreviations: Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001), Generalized Anxiety Disorder (GAD-7; Spitzer et al., 2006), General Health Questionnaire (GHQ-12; Goldberg & Hillier, 1979), civilian version of the PTSD Checklist (PCL-6; Lang & Stein, 2005), Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 2001), Clinical Interview Schedule (CIS-R; Lewis et al., 1992), Burnout Assessment Tool (BAT-12; Schaufeli et al., 2020).

2.5 Thematic Synthesis

Table 4 depicts the qualitative studies' contribution to each theme in the thematic synthesis.

Table 4

Cross comparison of themes between qualitative studies

Themes	Denham et al, 2023	French et al, 2022	Hegarty et al, 2022	Liberati et al, 2021
Theme One: Exacerbated Betrayal by Government	*	*	*	
Theme Two: Systemic Issues within the NHS	*	*	*	*
Theme Three: Feeling Intentionally Betrayed by Upper-Management	*	*	*	*
Theme Four: Experience of Moral Dissonance at Provision of Sub-Standard Care	*		*	*
Theme Five: Mental Health Deterioration	*	*	*	*
Theme Six: Management and Resolution of Moral Distress			*	*

2.5.1 Theme One: Exacerbated Betrayal by Government

Three of the papers explicitly discussed participants who expressed feeling betrayed by the governments' management of Covid-19 (Denham et al., 2023; French et al., 2022; Hegarty et al., 2022). This perceived betrayal compounded participants' existing disillusionment with the government for prolonged underfunding of the NHS pre-pandemic, which led to further staff shortages on top of existing staff shortages. The papers highlighted participants' anger in the regular change of national Covid-19 guidelines (Denham et al., 2023; Hegarty et al., 2022), which they felt were not in keeping with the surges of Covid-19 patients in hospitals, nor based on scientific evidence (Hegarty et al., 2022). Therefore, the papers reported that HCWs did not feel supported at this greater institutional level, which juxtaposed against the governments' and medias' "NHS heroes" narrative, that pressured staff to view their roles as a moral duty (French et al., 2022; Liberati et al., 2021, p. 8).

One of the papers highlighted participants' views on the governments' lack of accountability for their errors, stating "if moral repair is to take place across the public sector, it will be vital for those leading the country to acknowledge and atone for their mistakes" (French et al., 2022, p. 520). Within this narrative was HCWs' acknowledgement that the governments' initial betrayals and errors may have been unintentional, due to the unprecedented nature of the pandemic, however their lack of subsequent acknowledgement and apology contributed to their sense of betrayal, indignation, and disillusionment, more so than the original harm (French et al., 2022).

2.5.2 Theme Two: Systemic Issues within the NHS

All four papers identified HCWs' frustration and sense of powerlessness against systemic issues in the NHS. Again, the papers noted the systemic issues present pre-pandemic, but felt were exacerbated throughout the pandemic. The perceived lack of funding for the NHS was felt to increase HCWs' exposure to PMIEs, such as understaffing, inadequate level of PPE and medical equipment. The papers reported on participants' expressed frustration with organisational regulation of PPE, such as inequitable distributions, which put staff and non-Covid patients at risk (Hegarty et al., 2022).

Within the studies, participants acknowledged the rapid changes that were made to address the surge of Covid-19 patients; however, they perceived a sense of betrayal in the way this was sometimes managed. For instance, the studies noted the redeployment of staff without warning or discussion with the staff in question, redeployment of staff to entirely different areas without adequate training (e.g. community mental health staff to inpatient units; Liberati et al., 2021). This included deployment of “new staff [who] were not always used to dealing with mortality, including those who had recently left their studies” (Denham et al., 2023, p. 9). The papers further noted HCWs’ perceived systemic betrayal in the delayed initiation of certain practices, including mandating PPE (Hegarty et al., 2022) and staff Covid-19 risk assessments (Liberati et al., 2021).

Two of the studies reported systemic failures in organisations’ response to disclosures made about issues affecting staff or patient welfare through official reporting channels (Denham et al., 2023; Hegarty et al., 2022). This was one example of how participants across all four papers expressed a lack of trust in their organisation, and felt their organisation was not supportive of their needs. The papers identified HCWs’ fractured relationship with the NHS, with perceived feelings of cynicism and disengagement, leading many to express a desire of quit their role or to “leave the health care profession entirely” (Denham et al., 2023, p. 12). One paper highlighted that the MI caused to staff had destroyed their capacity for trust not only in the immediacy of the PMIEs experienced, but also long-term (French et al., 2022). However, this study noted that although HWCs acknowledged the distressing nature of their relationship with the NHS, they also expressed a sense empowerment in recognition of their agency, and identified new ways of working, akin to a state of psychological growth post-trauma (French et al., 2022).

2.5.3 Theme Three: Feeling Intentionally Betrayed by Upper-Management

A predominant theme across the papers related to HCWs’ perceived betrayal through abandonment by upper management. Participants identified violations of their trust by individuals in positions of authority. The papers reported a sense of abandonment and “lack of care from leadership, in which they were deemed to be disposable or replaceable” (French et al., 2022, p. 517). The studies highlighted the perceived intentional nature of betrayals, where violations to trust where enacted voluntarily by managers through lack of care. For instance, in managers choosing not to say they were putting staff at risk, and acting to mitigate this, when they did not have the correct PPE after research indicated this was needed (French et al., 2022).

Across all four papers, HCWs experienced betrayal from those holding “legitimate authority”, where management gave the appearance of being present with frontline staff but were in reality absent and unreachable. Managers were also noted to be dismissive of staff’s expertise, which was again seen as an intentional act of betrayal which affected their level of autonomy and led to a sense of powerlessness. The predominant emotions attached to these experiences for participants were that of frustration and anger, in line with the experience of betrayal-based MI.

Within this theme, middle-management and those with line-management duties were perceived to be caught in the moral conflict of supporting their staffs’ needs whilst imposing the organisation’s demands on them (Hegarty et al., 2022). This was particularly linked to line managers’ guilt for redeployment of staff into new and difficult areas of work, without adequate resources to address staffs’ concerns individually. Line managers shared a similar sense of betrayal from those above them in the management hierarchy, citing that no one was supporting them, and that they were subjugating their own needs in service of the staff they were there to protect.

2.5.4 Theme Four: Experience of Moral Dissonance at Provision of Sub-Standard Care

This theme, present across three of the papers, encompasses HCWs’ perceptions of failing in their duty of care to their patients through provision of sub-standard care. This theme was directly linked to commission-based MI, where HCWs predominantly expressed guilt for their personal responsibility in letting their patients down. Interestingly, there was also a degree of guilt by association (Denham et al., 2023; Hegarty et al., 2022), where HCWs stated "feeling complicit in a system they viewed as increasingly less equipped to service public need and provide high quality care" (Hegarty et al., 2022, p. 8).

Participants narrated a host of PMIEs across the studies, including redeployed staff having to work outside of their competencies, being complicit in protocols that prevented families seeing their sick and dying loved ones, and delaying non-urgent care leading to deterioration of patients' health. Staff not on the frontline further expressed moral distress at the iatrogenic harm caused by perceived provision of sub-standard care via telehealth, being unable to refer patients to appropriate services that were no longer operational, providing shortened psychotherapeutic interventions for complex patient presentations due to staff shortages (Hegarty et al., 2022), and questioning the ethical and legal basis for depriving patients of their human rights through extensive confinement of psychiatric inpatients to their rooms (Liberati et al., 2021). One study observed that HCWs "refused to abide by policies they morally disagreed with" (Hegarty et al., 2022, p. 8) as a method of self-protection from moral dissonance. This reaction tended to be more viable for older HCWs, who had more years of clinical practice, had returned from retirement to work during the pandemic, or held a management position.

2.5.5 Theme Five: Mental Health Deterioration

Somewhat unsurprisingly, all the papers found that participants' wellbeing was negatively impacted and reported on a variety of poor mental health outcomes. The papers informed on HCWs mental health symptoms in the immediate aftermath of PMIE exposure, which include anxiety leading to sleep disturbance and mental health related sick leave (Hegarty et al., 2022). Anxiety was also perceived to be linked with guilt and self-doubt around clinical decision making (Denham et al., 2023; Liberati et al., 2021). One paper reported HCWs’ exacerbated burnout brought on by taking on more work to mitigate the harmful impact of pandemic changes in care provision on their patients (e.g., through continued contact to patients deemed to be low-risk; Liberati et al., 2021).

One study reported HCWs’ “deeply traumatic experience[s] of witnessing many service user deaths over a short time period with little time to grieve and process what had happened” – leading some to take sick leave (Liberati et al., 2021, p. 8). The paper highlighted that other HCWs expressed a real need for taking time off, or a desire for being transferred to a different service, but felt unable to due to a sense of duty and obligation to their patients and pressured clinical teams (Liberati et al., 2021). On the other hand, those who had to shield at home expressed feelings of helplessness and guilt and experienced a lot of isolation (Denham et al., 2023; Liberati et al., 2021).

2.5.6 Theme Six: Management and Resolution of Moral Distress

Two of the papers reported findings that could be captured by a theme around the management and resolution of moral distress (Hegarty et al., 2022; Liberati et al., 2021). Participants predominantly expressed use of adaptive management strategies, including confiding in a trusted, non-judgemental other who provided necessary reassurance, or disengagement and distraction from internal moral distress.

The papers informed that HCWs confided in colleagues, clinical supervisors, line managers, and reflective practice groups in a genuine and open manner. The importance of this seemed to be around “being able to openly express their feelings of guilt, anger, and disillusionment, with a non-judgemental, empathic other” to help contain and normalise their moral distress (Hegarty et al., 2022, p. 9). Contrary to this, others felt that continued exposure to PMIEs and limited perceived organisational support prevented them from being able to process their experiences. Supervision was also perceived by some as a place to contain negative feelings, but not to necessarily resolve them (Hegarty et al., 2022). One study highlighted that organisations had communicated available sources of support to HCWs, including anonymous helpline numbers and mindfulness courses (Liberati et al., 2021). However, some highlighted that it was not easy to access these resources due to work pressures and lack of time. The widespread effects of the pandemic were felt to help HCWs cope with increased work demands, for instance in being able to leave their house and maintain a sense of routine while many were forced to remain at home, and in receiving gestures of appreciation from the public (Liberati et al., 2021).

One study reported participants’ disengagement from their negative emotions, through engagement with practical activities that required their psychological presence (e.g., cooking, exercising). Whilst these activities were viewed to offer temporary release, some HCWs found it difficult to maintain this mental separation at night without distractions and space for mental rumination. The study highlighted that some participants were able to move on from their moral distress by changing their perspective and regaining their autonomy through focusing on the good they could achieve professionally in the future. This was linked to being able to learn from PMIEs and make changes to prevent them happening again (Hegarty et al., 2022). Others experienced relief from their moral distress by removing themselves from the morally challenging environment, including ending redeployment and changing jobs. Those who did not leave the morally challenging work environments appeared to continue experiencing adverse effects of their moral distress and acknowledged that this heavy personal cost would carry on until their organisations were perceived to meaningfully address systemic issues that caused staff exposure to PMIEs.

2.6 Quantitative Literature

2.6.1 Demographic Characteristics

The two papers included in this portion of the review highlighted some interesting socio-demographic variables in their samples. Significant statistical differences were found between those who completed the short and long surveys in the Lamb et al. (2021) study, where the long survey contained measures pertaining to secondary mental health outcomes and MI. The study found that men, those identifying as being from racialised backgrounds, and those born outside the EU (including the UK), doctors, other clinical staff and non-clinical staff were significantly less likely than nurses to complete both surveys (Lamb et al., 2021). It was not clear or speculated why nurses were perhaps more motivated to complete both short and long surveys. Of the 28% of the sample who met cut off on the MIES (quantified as moderately or strongly agreeing with one or more items; mean score = 15.8); being male, a doctor or nurse, or from a racialised background made participants significantly more likely to meet cut off on the MIES (Williamson et al., 2022). Several other factors were significantly associated with meeting cut off on the MIES, including staff who were redeployed, staff who reported lack of PPE, staff who had close contact with Covid-19 patients, those who reported a lack support from colleagues, managers, and family members, or who had a colleague die from Covid-19 ($p<0.001$; Williamson et al., 2022).

2.6.2 Mental Health Measures

In the MIES measure, acts of betrayal were the most frequently endorsed items (22% meeting cut off), followed by acts of omission (15%), and commission (6%; Williamson et al., 2022). A significant proportion of the sample also met criteria for mental health disorders; 25% met criteria for probable PTSD, 41% for burnout, 56% for common mental disorders (CMD), and 11% for probable alcohol misuse (Williamson et al., 2022). In the other paper, 58.9% of participants met threshold for probable CMDs, 23.2% for probable anxiety, 27.3% for probable depression, 30.2% for probably PTSD, and 10.5% for probable alcohol misuse (Lamb et al., 2021). In the two months prior, 8.5% of participants had thought about taking their own life, 2% had attempted this, and 3% had self-harmed (Lamb et al., 2021).

2.6.3 Synthesis of Findings

Multivariable logistic regression showed those who significantly endorsed items on the MIES were more likely to meet criteria for probable CMD, PTSD, depression, anxiety, and burnout, but not alcohol misuse (Williamson et al., 2022). However, acts omission and commission were significantly associated with greater alcohol misuse. All three facets of MI on the MIES were most strongly associated with probable PTSD (Williamson et al., 2022).

Differences were also found in the way different HCWs reported PMIEs. All staff who met threshold for any probable mental health condition were at least twice more likely to report PMIEs compared to those who did not meet threshold on a mental health measure. Doctors with a probable mental health condition were at least two times more likely to report a betrayal by colleagues, and those outside the health service. Nurses with a probable mental health condition were also 2.7 times more likely to experience a betrayal by those outside the health service and perpetrating acts that went against their values or morals (Williamson et al., 2022).

Interestingly, a multilevel logistic regression model showed that the chances of meeting a significant GHQ score, indicating probable CMD, was 0.98 times less likely for each increased year of age, when controlling for all other covariates (Lamb et al., 2021). Men where 0.7 times less likely to have probable CMDs than women. Nurses were over two times more likely to have probably CMDs than doctors, with other clinical and non-clinical staff being more likely to experience probable CMDs than doctors. Participants reporting high exposure to PMIEs were 2.6 times more likely to report probable CMDs than those with low PMIE exposure (Lamb et al., 2021).

Similar trends were seen when exploring secondary outcomes (i.e., anxiety, depression, PTSD, alcohol use, and suicidal ideation). Older male participants were less likely to report probable anxiety and PTSD than younger female participants. Black HCWs were less likely to report symptoms of depression than White HCWs. HCWs from racial minority backgrounds were less likely to report alcohol misuse that White HCWs. Compared with all other HCW groups, doctors were less likely to report probable anxiety, depression, and PTSD. Participants reporting higher PMIE exposure were more likely to experience probable depression, PTSD, and alcohol misuse (Lamb et al., 2021).

2.7 Discussion

The studies reviewed discussed the prevalence and experiences of PMIEs and subsequent MI for HCWs working during the Covid-19 pandemic. Associated secondary difficulties were also explored, both qualitatively from the participants' verbal reports, and quantitatively through use of validated measures. The secondary difficulties included experiences symptomatic of anxiety, sleep disturbance, burnout, depression, PTSD, suicidal ideation, self-harm, and alcohol misuse. Participants further discussed their emotional states when facing a range of PMIEs, such as experiences of hopelessness, cynicism, anger, isolation, guilt, shame, and frustration. Some coping strategies used by the participants were described in the qualitative literature, which helped HCWs consolidate their MI. These strategies included candid confiding in trusted colleagues, clinical supervisors, and managers, use of reflective groups, learning from PMIEs and making proactive changes to prevent the PMIE going forwards, removing oneself from the morally injurious environment, and refusing to abide by protocols they morally disagreed with. Others described emotional disengagement and distraction techniques, such as cooking and exercise, to be helpful in coping with their experiences of PMIEs.

Whilst there was a degree of overlap between the experience of PMIEs, MI, and subsequent difficulties experienced across the studies, there were also many differences in how these were quantified. For instance, the prevalence of diagnosable CMDs investigated in the quantitative studies fail to account for the range of different experiences participants reported in the qualitative literature. These nuanced perceptions highlight the host of challenges HWCs experienced that does not meet some sort of diagnosable mental health threshold but are equally important when thinking about what HCWs found to be morally challenging, and what they feel would help them in successfully processing and moving on from these experiences. Equally, qualitative literature can help to identify important mechanisms behind the experience of MI versus psychological growth following the experience of PMIEs. One important notion appeared to be the benefit of acknowledgement, accountability, and genuine apology for moral repair.

A limitation of the review is that all the studies collected data on HCWs' experience of PMIEs, MI, and secondary difficulties either explicitly during the first wave of the pandemic, or at later points during the pandemic. As such, none of studies enquire about the prolonged impact of PMIE experiences on MI and secondary difficulties. Furthermore, none of the studies investigate the impact of PMIE exposure and MI on HCWs' family life and social functioning. This is important given literature that indicates HWCs' perceived work-life balance is associated with greater job satisfaction, organisational commitment, retention, and social and family functioning (Irawanto et al., 2021; Shabir & Gani, 2020). On the other hand, a perceived lack of balance between work and personal life has been linked to HCW stress, lower levels of organisational commitment, lower productivity, and turnover (Aamir et al., 2016; Shabir & Gani, 2020).

Moreover, the majority of the studies' samples contain predominantly White participants, with participants from minoritised communities not representative of percentages of minority ethnic workers in the NHS workforce (NHS England, 2023a). Minoritised HCWs in the sample of one study reported more PMIEs than their White counterparts (Williamson et al., 2022). This indicates a lack of knowledge and understanding of the experience of HCWs from racially minoritised backgrounds, as these individuals may have experienced the challenges of the Covid-19 pandemic more harshly due to an exacerbation of existing racial injustices in the UK healthcare system (Kapilashrami et al., 2022; Okhiria & Rahnejat, 2021). Additionally, people from minoritised backgrounds may have had greater fear of contracting Covid-19 due to emerging reports of racial disparities in rates of infection, hospitalisation, and mortality (Kumar & Encinosa, 2023).

2.8 Aims & Objectives of the Present Study

Literature indicates HCWs experience of PMIEs and MI can lead to several detrimental outcomes, including emotional states, diagnosable mental health difficulties, intention to quit, burnout, and absenteeism. The above systematic review identified prevalence and range of PMIEs that influence HCWs experience of MI, and the negative impacts of this during the UK Covid-19 pandemic. Besides the four studies identified, there is a dearth of qualitative research that provides insight on the experience of MI in HCWs with a lived experience of PMIEs during the Covid-19 pandemic in the UK. In addition, the longer-term impact of PMIE experiences now that we are out of the pandemic is yet to be explored. This includes the impact of PMIE experiences on HCWs’ interpersonal relationships and family life. This longer-term impact is important to explore, as the period of consolidation and reflection that is permitted once HCWs are no longer burdened with their pandemic duties and work levels may change their perspectives and narratives of their experiences. Furthermore, it is important to attempt to recruit an inclusive sample with regards to greater ethnic diversity to gain an understanding of additional layers of experience from minoritised HCWs.

Therefore, this study aims to explore how HCWs who experienced PMIEs make sense of their experiences, and whether this leads to the experience of MI or psychological growth over the long term. A secondary aim is to explore whether experiences of MI have impacted on clinician’s family and social life, and emotional and psychological wellbeing over the long term. A final aim is to explore what organisational factors impacted on experiences of moral injury during the Covid-19 pandemic.

3 Methods Chapter

3.1 Chapter Overview

This chapter will begin by outlining the philosophical position taken up by the researcher, leading to a rationale for using qualitative reflexive Thematic Analysis (TA) as the method of data collection and analysis. Full procedural aspects of the research, from participant recruitment and method of data collection will be described before considering the process of data analysis. Approaches for evaluation of the quality of the study, as well as ethical considerations, and plans for dissemination, are also presented. In keeping with a reflexive TA approach, the chapter is written in the first-person perspective to demonstrate the interactive components between my positionality as the researcher and the research process.

3.2 Philosophical Positioning of the Research

This research drew on a critical realist paradigm and employed a reflexive TA methodology in addressing its aim: *to explore the experiences of potentially morally injurious events (PMIEs) and moral injury (MI) among health care workers (HCWs) who worked during the Covid-19 pandemic.* To elucidate the rationale for this approach to the study, it is first necessary to explain my position in relation to the two philosophical concepts of ontology and epistemology.

Ontology refers to the nature of social reality along a continuum. At one end is naïve realism – the belief in the existence of an objective external reality, independent of a "*knower*" (Blaikie, 2007), which can be understood using appropriate methods and scientific rigour. At the opposite end of this continuum is relativism or interpretivism – the belief that objective reality is not possible and exists only to the extent of one's thoughts. From a relativist perspective, the "*knower*" is integral to the action of knowing, and 'reality' is based on one's own subjective experience of the external world (Blaikie, 2007). From this stance, knowledge and knowledge production are relative to cultural, material, and societal contexts, and multiple realities and truths exist, assuming that reality can never be fully known (Guba & Lincoln, 1994). Relativism highlights that people consciously create their own social realities through language, discourse, beliefs, and meanings that they attach to the world (Robson, 2002). Epistemology is fundamentally the theory of knowledge, or knowing, and is predominantly concerned with the extent to which knowledge of the "real world" is reliable and valid (Willig, 2012). As such, a belief about the nature of reality will inform a belief about how knowledge of that reality can be acquired. Ontology has therefore been positioned as the starting point of research (Blaikie, 2007) from which an epistemological position will be derived and a subsequent methodology selected, resulting in the overall paradigm (Denzin & Lincoln, 2008).

My ontological and epistemological perspective reflects the middle ground critical realist position (Bhaskar, 1998). Ontologically, critical realism assumes an objective and external reality. In this research for instance, there is an ambition to gain insight into processes underlying HCWs' experience of PMIEs and MI, and there exists a material reality where this experience influences public health practice. Epistemologically, and in contrast to naïve realism, critical realism concedes that this reality can only be measured imperfectly, via the subjective attitudes, beliefs, and biases held by participants and researchers (Banister et al., 1994). In this approach, the objective world and the knowledge individuals have of it are not the same, as people experience different aspects of reality. Critical realism acknowledges the contributions which different perspectives can offer, conceding that each perspective provides a partial account of a phenomenon (Joseph, 2004). Unlike relativism, a critical realist stance does not pose that reality itself is socially constructed, but rather an individual's "truth" of an objective reality, and the associated methodologies used to investigate such realities are socially constructed (Bhaskar, 1978).

Bhaskar (1978) argued that knowledge and reality are inherently linked, and therefore reality without the context of knowledge bears little meaning. This supports the rationale for a critical realist approach to understanding the experiences of HCWs during the Covid-19 pandemic. Whilst relativism invariably plays a role in understanding individuals' experiences, they should not be purely defined at a subjective level, ignoring the influence of wider level social contexts (Sayer, 2000). Therefore, a critical realist stance acknowledges individual experiences, and the meanings individuals attach to them, whilst also bearing the impact of wider social contexts on these meanings. For instance, this study assumes that responses provided by the participants reveal their understanding of various concepts such as MI, but that these understandings are impacted on by structural and contextual factors potentially unknown or unspoken by the participant. Similarly, interpretation of this data is through my subjective lens as researcher: an interpretive epistemology (Archer, 1995).

3.3 Rationale for a Qualitative Method

Guba and Lincoln (1994) describe methodology as the third question to ask of research, shaped by the answers to questions of ontological and epistemological positioning. Methodology is concerned with the practicality of how researchers facilitate an investigation to answer their research question. Research methods are broadly characterised as one of three approaches: quantitative, qualitative, or mixed-methods – a combination of the former two approaches. Traditionally, social sciences researchers have tended to favour quantitative methods, reflecting the positivist paradigm that dominated philosophical stances in these subjects (Tuli, 2010). Positivism poses that the one “true” existent reality can be accessed via rigorous experimental methods involving hypothesis testing. As such, quantitative methods involve large participant samples, and are concerned with matters of objectivity, causality, replicability, and generalisability (Charmaz, 2014). Proponents of positivist quantitative methods support data that is “unbiased” and “value free”, whereby researchers keep their personal biases and opinions out of the research they are conducting (Sayer, 2000). However, this method is not appropriate for research concerned with individuals’ lived experience, where direct interaction with the researcher is required. This interaction invariably creates a double hermeneutic, where analysis of the data will be facilitated through my subjective lens and interpretation.

On the other hand, qualitative methods aim to explore and understand personal experience and meanings ascribed to them, resulting in rich descriptive data, in context (Willig, 2012). Qualitative methods seek to understand multiple subjective realities, positioning research participants as the experts of their own lived experience (Charmaz, 2014). Qualitative approaches gained increasing credibility in social science research in recent decades (Willig & Stainton-Rogers, 2008), and have become widely acknowledged for contributing rich insight to existing literature, built primarily on quantitative research. Guba and Lincoln (1994) posed that research investigations based on critical realist ontology and contextualist epistemology would be qualitative in nature. These methods would involve an exchange of ideas and beliefs that would help illuminate different realities into conscious awareness, whilst also addressing historical structures that are in place (Guba & Lincoln, 1994). The current research aimed to supplement quantitative findings (discussed in the introductory chapter) to explore participants' lived experience of treating the sickest of the population during the Covid-19 pandemic. I hoped that the use of this methodology would empower, and give voice to, the needs of HCWs during a critical period in history.

3.4 Thematic Analysis

The data was analysed using reflexive TA (Braun & Clarke, 2019a). Braun and Clarke (2006) define TA as a way of organising, identifying, analysing, and describing themes from a body of data, which allows for further analysis and interpretations to be made. This form of data analysis is viewed as a good foundation for developing qualitative analytical skills, particularly for researchers new to qualitative methods (Braun & Clarke, 2006a). Braun and Clarke (2006) highlight the researcher's duty to make decisions about the epistemological position, the data, and analysis aims, prior to beginning analysis. This method is used to explore and understand the experiences of participants, whilst acknowledging their social, material, and power contexts (Braun & Clarke, 2006a). Thus, these contextual lenses were used to make sense of participants' meaning making of their experiences (Braun & Clarke, 2006a). Reflexive TA highlights the impact of the researcher's own positionality and relationship to the phenomena under study, foregrounding this as a fundamental area of awareness throughout the analysis process (Braun & Clarke, 2019a). Braun and Clarke (2019) acknowledge the subjectivity of this process of data analysis, describing it as an interactive process between the data, the researcher's positionality, and the research context.

Reflexive TA was viewed as an appropriate form of qualitative analysis due to its flexibility in accommodating a range of epistemological positions that can be employed inductively or deductively (Braun & Clarke, 2006a). An iterative, inductive approach was used to analyse the data in the initial stages of code development, to identify initial themes from the data. This means that the analysis was data-driven from a bottom-up approach, rather than based on pre-existing theories and assumptions. Codes were developed based on semantic meaning within the data, where I tried to stay close to the discourse and introduce little interpretation. For instance, the utterance *"you're going into work every day in a hospital, and you have to go home to your family. You could be putting people at risk"* was initially coded as *"going into work risks my families' health"*. At the higher levels of the data analysis process, latent codes where assigned where the latent meanings of data seemed salient (Braun & Clarke, 2019a). For instance, the statement *"I was asked if I'd do other shifts, I said yes…it's one of those things that you say yes to go help out your colleagues, because you know that if someone isn't there they're going to be struggling on alone"* was assigned the code *"sense of camaraderie"*. A phase framework was chosen, which aligned with the reflexive TA approach and acknowledged that the resultant analysis will vary reflexively between different researchers (Braun & Clarke, 2006a). At a later stage, a deductive approach was used to interpret resultant themes in the context of social, historical, and political contexts, as well as via comparison to existing literature (Willig, 2012). For instance, participants' exacerbated sense of betrayal by the government was considered in respect of longstanding cuts to NHS funding and austerity measures (The King's Fund, 2022), which has been well-documented to cause systemic issues in the NHS (Morley et al., 2019).

3.5 Ensuring Research Credibility

Research evaluation criteria such as objectivity and reliability within the positivist (and therefore quantitative) stance are not easily transferrable to qualitative research, specifically ones that constitute a contextualist epistemological position (Madill et al., 2000). The contextualist stance dictates that the results of research analysis is understood within context of the researcher, participant, and social world, and can therefore vary depending on these contexts, introducing flexibility in interpretation (Pidgeon & Henwood, 1997). This makes it difficult to apply realist quantitative evaluation criteria to this research. As such, the adaptability and flexibility provided by the TA methodology brings with it responsibility for the researcher to ensure quality in the research presented (Joffe, 2012). This includes a clear stance on the theoretical and epistemological positions that guide the research from its inception (Madill et al., 2000). It is considered that a strength of the contextualist position is the triangulation method where new or contradictory findings are reflected on and considered within the wider social context (Madill et al., 2000). However, robust criteria for the evaluation of qualitative research need to be applied and demonstrated, to ensure rigorous standards in the research process, and accurate presentation of findings.

To this end, many psychological researchers have developed evaluation criteria that is applicable to qualitative research, to ensure high standards (Braun & Clarke, 2006a, 2013a; Elliott et al., 1999; Tracy, 2010; Yardley, 2000, 2017). Despite this, it is recognised that there is no consensus of a "gold standard" of evaluative criteria for qualitative research (Coyle, 2007), but rather that researchers must choose the most suited set of evaluative criteria to their epistemological position. As such, I felt that criteria derived from quantitative approaches

(Elliott et al., 1999), and those based on more constructionist or phenomenological approaches to research (Yardley, 2000, 2017), were less suited to the critical realist stance of the reflexive TA methodology. Therefore, I chose to use Braun and Clarke's (2013) 15-point checklist, as I felt this was the most appropriate criteria for achieving high standards and rigour in this research. I applied these 15 points throughout conducting the research and demonstrate how each criterion was achieved through a summary of the criteria and my use of it in Appendix D.

3.6 Researcher Reflexivity

The process of reflexivity is fundamental to qualitative research, to consider and manage the risks of researcher bias. Researcher reflexivity involves the researcher’s reflection on how their positionality, identity, beliefs, values, and social and cultural contexts interconnect with their research (Willig, 2019). This process is a crucial part of TA and is particularly important to the process of reflexive TA (Braun & Clarke, 2019a). The contexualist stance, which the critical realist position is set in, also considers that the researchers’ context is a key factor in research development and analysis. However, it is acknowledged that certain aspects of the researcher’s position may be unconscious and as such remain unexplored (Pilgrim, 2017). From a critical realist stance, reflexivity is considered to bring into conscious awareness the influence of the researcher’s subjectivity (Yardley, 2017).

3.7 Positionality Statement

I am a 31-year-old British Iranian, middle-class women, who was born and raised in the UK. I am a current trainee clinical psychologist, with nine years’ experience of working in different NHS mental health services, predominantly in community settings. I am aware of how elements of my experience of working within NHS organisational structures may have introduced bias into the way I perceive participants’ challenges within the NHS settings that they worked in. I further acknowledge that my role as a pre-qualified trainee may have differentially influenced how I perceived and aligned with the fellow pre-qualified participants, as well as the post-qualified professional participants, in my capacity as researcher. Additionally, my professional experiences as a woman from a minority background working within the predominantly White profession of clinical psychology, may have impacted on my perceptions of the experiences of racialised participants working in healthcare.

I reflect on my own experiences of working during the Covid-19 pandemic and draw comparisons with the subjective experiences of my fellow NHS colleagues. I cannot help but feel some guilt at the comparison; where my experience was vastly different and consisted of adapting to working from home, from my bedroom in a house share, where my biggest frustration was lack of working space and the uncontrolled environment of living with strangers. I did not risk my health, my life, or potentially that of my loved ones, by continuing to work in a clinical setting. However, I also reflect on the difficulty of working with psychologically distressed individuals in isolation, without in-person support from my clinical team. I missed the social element of seeing my colleagues and having informal conversations, where so much of my own learning and sense of containment was born from.

From a political stance, my view, and dismay, that the government offered NHS workers a mere 1% pay rise during the pandemic (Best, 2021), along with the physical and psychological risks placed on frontline NHS workers, increased my compassion for the participant group. My frustration came from the knowledge that NHS staffs' pay had been falling short of the rate of inflation for years prior to the pandemic (Tuc.org.uk, 2023) and was compounded by the governments' unwillingness to adequately increase financial compensation in recognition of the additional pressures and risks placed on frontline workers during the pandemic.

Prior to facilitating the research interviews, I felt confident in the range of views and perspectives I was likely to gather from the participants. My confidence arose from conversations I had had with fellow NHS colleagues about the pandemic as it unfolded, including feelings of anger and frustration towards the NHS institution. I expected my participants to share their fear, anxiety, and uncertainty at the start of the pandemic; to be frustrated at the lack of adequate PPE; to express betrayal at the shortage of equipment and staffing levels. Whilst the study participants did reflect these perspectives and emotional states, I was caught unaware by the nuanced picture presented across the range of HCWs. The participants’ perseverance in the face of a worldwide pandemic, their compassion, drive, and sense of duty to their patients and colleagues were shared with an abundance I felt both surprised and humbled by.

The stories shared were often heavily emotionally laden, signifying the emotional burden on the clinician, and I was struck by my own emotionality in response to specific narratives of individuals’ severe illness or death. I reflect I was largely unaware of the workings of critical care departments during the pandemic and was particularly intrigued by participants’ recollections of working in this setting. I was further struck by some of the participants’ resilience in resisting instructions that went against their moral values, as well as their psychological resilience against internalising states of guilt or shame following the occurrence of avoidable PMIEs.

3.8 Design

A range of factors directed the decision to use a qualitative design to address the research questions. The critical realist epistemology informed the type of data and analyses that was applicable to the research questions. Guidelines for the application of qualitative methods to critical realist research prioritises in-depth interpretive data, such as interviews (Fletcher, 2017), as a method of identifying themes for further analysis. As such, semi-structured interviews permitted the researcher to address the research aims. Individual interviews were chosen over a focus group method to allow participants to freely express their views, without concern of a social desirability, or social conformity bias, causing participants to inhibit their responses in the presence of colleagues (Grimm, 2010).

3.9 Participants

3.9.1 Sampling Method & Size

Purposive sampling was used to recruit “information rich cases” that were known to have knowledge and experience of the phenomenon under research (Patton, 2002). It was considered that participants should be able to verbally communicate their experiences in a clear, coherent, and reflective manner (Spradley, 1979). As such, the participant sample required participants who could provide deeper insight into the area of study (Morse et al., 2002). These considerations informed the decision on the appropriate sample size. It was considered that the sample size should be large enough to permit new and rich understanding of experience, but also small enough for depth of case-oriented analysis. The idiographic aims of the research required the sample to be sufficiently small for an exhaustive analysis of each interview to be facilitated (Robinson, 2014). Braun and Clarke (2013) suggest between six to ten participants for small scale projects, and encourage researchers to use their subjective judgements to decide on the appropriate number of participants (Braun & Clarke, 2016, 2019a). Therefore, consideration of data saturation further informed the sample size. It is believed that saturation can be achieved within twelve interviews (Guest et al., 2006). Therefore, it was decided to aim for the recruitment of between twelve to fifteen participants. Ultimately, data saturation was achieved with a sample of 15 adults who were recruited for the study via convenience purposive sampling (Patton, 2002). The limitation of this sampling method is that new theoretical understandings cannot be developed, however analysis of the sample features can be undertaken and discussed (Flick, 2009).

3.9.2 Inclusion Criteria

The inclusion criteria sought English speaking HCWs who had worked in a UK hospital setting at any point during the Covid-19 pandemic and had capacity to consent. The pandemic was taken to be the period spanning all three surges, from March 2020 until February 2022. HCWs were defined as any individual in a clinical health-related occupation who directly provides health services to the physically or mentally unwell (e.g., nurses, doctors, occupational therapists). The inclusion criteria included HCWs of all different ranks and levels of seniority, in the hope to explore a broad range of peoples' experiences.

The inclusion criteria included people who returned to work or were deployed to different departments in response to increased staffing needs, and/or people who had subsequently left or were on sick leave from their role during the pandemic. This criterion was set to reduce sampling bias, to avoid only recruiting people who typically worked and continued to actively work in hospital settings to the study.

To note, the inclusion criteria initially sought allied healthcare professionals who worked in a critical care setting throughout the first and second peaks of the Covid-19 pandemic, in the UK. However, this criterion was broadened out to include all HCWs at any level of seniority, working in any hospital setting during the pandemic. This amendment to the sample inclusion criteria was in recognition of two factors; namely, outcomes of the pilot interview (these will be considered later), as well as recruitment challenges in enrolling critical care staff to the study.

3.10 Recruitment

A purposeful sampling strategy was used to recruit HCWs from anywhere in the UK, who met all recruitment criteria. The main recruitment strategy was through word-of-mouth, although the study advert (Appendix E) was also disseminated through social media, such as several relevant Facebook (e.g., “Allied Health Professionals”, “Doctors, Nurses, and All Health Practitioners”, “Healthcare Workers United (UK)”, “UK Doctors and Nurses Recruitment” etc.) and WhatsApp groups (the researchers’ university cohort group, a UK-wide trainee clinical psychologists’ group), LinkedIn, and Twitter. Relevant healthcare organisations such as the Royal College of Surgeons were also contacted to request the study advert to be retweeted or shared on their webpages and newsletters. Two organisations initially agreed to share the study advert through their social media: the Faculty of Intensive Care Medicine, and the Royal College of Physicians and Surgeons of Glasgow. Unfortunately, these initial agreements did not result in any advertising on the researchers’ behalf, despite applications being made, and several follow-up attempts.

Potential participants who showed interest in participation were able to contact me directly or agreed for their name and contact details to be passed along to me. In all instances, I made initial contact via email to thank potential participants for their interest in the study and attach the study information sheet (Appendix F) for provision of additional study details. Once potential participants had some time to read the information and respond, the consent form (Appendix G) was sent for review and signing, and arrangements were made to conduct the interview at a convenient time. At each contact, participants were encouraged to ask any questions that they wanted to seek clarity on. Participants’ electronic consent forms were received prior to conducting the interview. Participants were given the option for their interview to take place over video or audio/telephone, depending on their preference. All participants expressed a preference for video call, although one participant chose to keep their video off during their interview. A snowballing technique was also employed to boost recruitment. Snowball sampling involves asking each participant who has been interviewed to identify other people who meet the recruitment criteria (Ritchie & Spencer, 1994). Six people were recruited through this method.

3.11 Data collection: Interviews

3.11.1 Interview design

An interview topic guide (Appendix H) was created to address the research aims. The term ‘topic guide’ was preferred to an ‘interview schedule’, as it emphasises the utility in outlining broad topic areas to be investigated rather than specific questions (Arthur & Nazroo, 2003). The development of the topic guide involved consulting existing literature in qualitative research design (Sinclair et al., 2018) to consider topics, sequencing, and prompts for semi-structured interviews. This included considering the format of the interview, which consisted of the introduction (covering consent, confidentiality, and purpose of the interview), setting the context, main interview questions, final question leading to interview close, and debrief. Crucially, the topic guide aided me in gathering relevant information, whilst simultaneously permitting a participant-led format. This was facilitated through use of open-ended questions that were designed to be broad, to avoid constraints on what participants wanted to discuss in relation to the topic.

The order, wording, and way in which questions were followed up varied significantly between interviews, to allow for in-depth probing of key issues brought by the participant (Arthur & Nazroo, 2003). For example, whilst I utilised open-ended neutral prompts, (e.g. *“how did X impact you?”*) to elicit further elaboration (Willig, 2013), specific follow-up questions mirrored the language used by participants to maintain their understanding and build rapport during interviews (e.g., *"When you're in the midst of it, you're just kind of firefighting like you say, you don't necessarily have time to process. So when you did get a bit of head space to process, where was your head at?"*). Paraphrasing of participants' responses was also used to check my understanding of their response, summarise the point made, and provide an opportunity for further reflection and elaboration (e.g., *"It sounds like the staff felt quite comfortable to confide in you, about the frustration of being shouted at by the executive team, because they're trying to protect themselves and their loved ones at home, and each other. Um, you know the purple arrows, and it almost sounds like at every corner, there's someone to tell you off for doing something wrong"*).

Occasionally, I felt the need to validate or reassure participants' expressed views, whilst being mindful of causing undue influence from my presence and positioning on participants. However, at times a degree of validation or reassurance giving was needed due to the sensitive nature of the topics discussed, where, based on my clinical judgement I felt that not providing any form of validation might be emotionally or psychologically damaging to the participant. For example, when a participant was speaking about advocating for terminally ill patients to have a phone call with their families before being intubated, I reciprocated *"that's incredibly thoughtful to use that knowledge and that experience and think of, 'Well, how would I want people to be with me?'".* Many times, participants responses left several potential areas for follow up, or partially answered a different question from the topic guide. I attempted to follow up these threads of reflection by highlighting what the participant had previously said and providing opportunity for them to reflect further in respect of the question I wanted to ask next (e.g., *"So you mentioned about feeling sad that it confirmed what you already felt, and further validating your desire to leave the NHS. You also mentioned pride at the work that your colleagues in the NHS were doing and are continuing to do. Were there any other emotions* *that you felt during that during that time, when you had those moments of, 'This isn't how it should be delivered', whether it's to staff or to patients, and that sense of internal conflict?"*). This technique further communicated to participants that their interviewer was actively listening and thinking about their experiences, thereby increasing rapport.

3.11.2 Procedure

Semi-structured one-to-one interviews were conducted with participants between May 2022 and October 2022. In this period, 15 participants took part in the study, with interviews lasting approximately between 22 and 76 minutes. The average interview time was approximately 52 minutes. Interviews were conducted over video conferencing software, Zoom and Microsoft Teams, on my university account. At the time of applying for ethical consideration, research guidelines were preventing face-to-face research due to the Covid-19 pandemic, therefore it was not possible to offer face-to-face interview to participants. I was mindful that the facilitation of virtual interviews can be a complex process, including both audio-only and video formats. Therefore, it was crucial to develop a warm and safe environment, and build positive rapport with interviewees, to enhance the enquiry process (Sturges & Hanrahan, 2004). This environment and relationship can be more difficult to establish due to the lack of, or limited availability of non-verbal cues (Garbett & McCormack, 2001). However, qualitative telephone and video data has been evidenced to provide rich, in-depth information (Iacono et al., 2015; Sturges & Hanrahan, 2004). Additionally, TA is suited to all methods and the details of non-verbal cues were not necessarily important for this research as they might be in other methodologies (Braun & Clarke, 2006a, 2013a). Furthermore, the virtual interview method allowed me to consider a wider sample audience of HCWs anywhere in the UK and permitted participants to take part in the research without having to account for practical arrangements such travel time and expense. This method likely encouraged study participation by reducing burden to this busy sample population (Govasli &

Solvoll, 2020). Therefore, it was felt that the facilitation of virtual interviews did not prevent meaningful analysis. I was able to utilise my interpersonal and therapeutic skills to make participants feel at ease before starting the interview, ensuring to start interviews with a gentle warm-up conversation and to answer any queries that they had.

3.11.3 Pilot Interview

A pilot interview was conducted with the first participant, who met the inclusion criteria and was recruited through word of mouth, and whose results were included in the full analysis. During the recruitment process, the participant was informed that they were the first interviewee, and asked if they could provide some feedback following the interview, which they agreed to do. The aim of this interview was to obtain feedback from the participant on the wording of questions within the interview guide, and my general approach and demeanour in the interview. The interview lasted 76 minutes in duration and the participant provided verbal feedback after the interview. I further encouraged the participant to contact my research supervisors to provide any feedback that they may not feel comfortable sharing directly with me.

The participant's feedback highlighted that the first interview question *(“can you tell me a bit your experience of working in healthcare during the pandemic?”*) was perhaps too broad to start off with and suggested that I consider a more structured or specific question to start the interview. This was suggested to gently ease the participant into the interview discussion. In consideration of this feedback, the initial interview question was changed to *“Why did you want to take part in the study? What interested you about it?”*, before going on to ask the participant about their current job role. The interviewee further provided feedback that they found it helpful when I summarised their points and attempted to draw out their internal emotional and psychological experiences from the recollections of their experiences.

Additionally, the participant highlighted that the use of ‘anchoring topics’ such as the impact of their work on their interpersonal relationships, were quite helpful in bring their attention to key areas to reflect on, where they may not have naturally considered those broader implications and remained focused on the very practical nature of their work. The participant further appreciated the exploration of changes in their experience from pre-pandemic to post-pandemic. They reported that they found it helpful when, towards the end of the interview, their earlier reflections were linked to how they were experiencing things in the present.

I found the experience of conducting the pilot interview helpful in several ways. Firstly, the experience was humbling, which came as a surprise to me. Having conversed with colleagues in my own work settings during the pandemic, I felt relatively confident in the range of what I was likely to hear from my participants. However, this first participant provided new insight of her experiences on a critical care unit, in addition to her experiences of junior staff and redeployed staffs’ experiences, through her perceptual filter. I learnt I was not as emotionally prepared as I previously thought for the topic under investigation and could feel sadness rising in me as the participant recollected their pandemic experiences to me. I was struck by the participant’s resilience and the way she made sense of her story “*I would say, it definitely had a negative impact. However, I wouldn't change it for the world. I needed to be there, I had to be there…so yes, I’m not the same person, but it's fine because I had to do it and I would do it again.*” On reflection, the experience of conducting the pilot interview permitted me to become more emotionally prepared for subsequent interviews.

Secondly, the participant’s account of their experiences highlighted that I may not be capturing a variety of experiences by focusing the participant sample on critical care staff (e.g., *“we were very well looked after so, we were probably much better looked after than the nurses* *on the ward, so we did feel at least protected"*. Therefore, to capture the experience of HCWs working in other departments, the inclusion criteria was re-considered in discussion with my research supervisors and broadened out to include all staff working in a hospital setting during the pandemic.

Thirdly, I found the pilot interview helpful in allowing me to reflect on my position as researcher as opposed to a practitioner. Typically, in my role as a Trainee Clinical Psychologist, I am more familiar with taking the position of therapist, as the research elements of my role are more of a solitary endeavour in independent study. Therefore, during this interview, I felt an internal sense of conflict where I had a natural inclination to provide reassurance and validation at the emotionally and psychologically distressing events that were being shared with me. However, I considered the importance of not engaging in this dialogue to allow the interviewee space to elaborate uninterrupted, and to not be too directive in steering the dialogue once the interviewee felt comfortable, so that the interview could be led by the participant's responses.

Fourthly, this experience allowed me to consider my manner of asking questions and follow-up prompts. I found I was conscious of avoiding asking leading questions, and so I had to consider the specific wording of questions to be neutral, such as "*how did you experience [the aforementioned points] emotionally?*". I also became aware how I experienced emotional discomfort when asking the participant about their mental health, specifically, if they had struggled with mental health difficulties prior to the pandemic. I reflected that my discomfort was based on the personal nature of the question, that felt somewhat intrusive given that I was interviewing the participant as a one-off event. Furthermore, I considered my participant sample as my colleagues in the broader sense, and asking this question brought forth the discomfort I would likely feel with being asked this question in such a setting. I considered how my own hesitation and discomfort with this question may hinder my ability to broach this subject with my participants and reflected on the importance of using my interpersonal and therapeutic skills to create rapport from the very first contact with participants. Additionally, I decided to ask this question at a later point in the interviews, where participants were fully engaged in the topic and were observed to be comfortable. I further considered the importance of how the interview questions are asked, in terms of my facial expressions on video, as well as my pitch, tone, and volume.

3.12 Data Analysis

The specific structured method of reflexive TA was used to analyse the interview data, as outlined by Braun and Clarke (2006a, 2019a). This method highlights six phases that were followed in a recursive manner, where each phase was revisited, and data was re-analysed. The six phases are outlined below.

3.12.1 Phase 1: Familiarisation with Data

The process of familiarisation involved immersing myself in the data by watching and listening back to the interviews, whilst electronically transcribing each interview. Each transcript was read several times, where I began noting initial patterns and meanings in memos. This phase also involved checking interview transcripts against the original recordings to ensure accuracy of transcripts (Braun & Clarke, 2006a).

3.12.2 Phase 2: Generating Initial Codes

This phase involved systematically assigning initial codes to each transcript at a sentence level (Appendix I) using NVivo 12 qualitative data analysis software. At this stage, equal attention was given to the entire dataset to notice inconsistencies and not focus solely on dominant narratives (Braun & Clarke, 2006a).

3.12.3 Phase 3: Generating Themes

Codes were grouped into candidate themes relating to the research questions. Themes were created based on prevalence, as well as how well they captured the articulated views of participants (Braun & Clarke, 2006a). Sub-themes were also beginning to develop; however, these were not fixed at this point in the analysis and were subject to review.

3.12.4 Phase 4: Reviewing Themes

This consisted of reviewing the identified themes to ensure each theme was representative of the coded data extracts, and considered whether they still told the story of the data. If themes were felt to not have enough data, they were discarded or collapsed and merged into other themes. This process included working with the coded data identified in phase two, and with the entire data set, requiring a review of phases one to four. A thematic map was utilised and reviewed on several occasions, to facilitate the revision of themes.

3.12.5 Phase 5: Defining and Naming Themes

This iterative process included naming themes and identified subthemes. It was further ensured that themes were related but still had distinct boundaries that held a coherent narrative of the data and reflected the overall questions posed by the research (Braun & Clarke, 2006a).

3.12.6 Phase 6: Producing the Report

Final themes and subthemes were written into a coherent narrative, and example data extracts that best captured the flavour of each theme were selected for inclusion in the write up. Themes were presented such that they represented the narrative within the data and answered the research questions. This can be seen in the next chapter. During the analysis, negative case analysis was used to identify data extracts that opposed particular ideas or themes, so that the data could be considered from multiple angles. The final themes were reviewed by my research supervisors.

3.13 Ethical Considerations

3.13.1 Ethical Approval

Ethical approval was pursued, and granted on 19th November 2021, by the University of Essex School of Health and Social Care ethics committee, prior to the commencement of data collection. This research also adhered to The British Psychological Society Code of Human Research Ethics (BPS, 2014) and the Health and Care Professionals Council Standards conduct, performance and ethics (Health and Care Professionals Council, 2018). Minor amendments were later made to the originally approved ethical application to highlight changes made to the inclusion criteria. These amendments were approved by the University of Essex School of Health and Social Care ethics committee on 9th September 2022 (Appendix J).

3.13.2 Informed Consent

Participants were informed of the aims of the research via an information sheet, which was emailed to them. The information sheet contained responses to questions surrounding the length of interviews; participants' right to decline participation; participants' right to withdraw from the research at any point, meaning their data would be destroyed without any further contact from the researcher; potential anticipated risks and benefits in their participation; and how anonymity and confidentiality would be maintained. Participants were further encouraged to contact the researcher with any questions or concerns prior to participation. After participants had the opportunity to read the information form, a consent form was emailed to them, so that written informed consent was obtained in all instances. Participants were again asked at the start of their interview if they were still happy to continue taking part in the study and reminded that they were able to withdraw from the research at any point.

3.13.3 Confidentiality and Anonymity

To maintain the confidentiality and anonymity of participants is to ensure that no identifiable data is reported from participants. To achieve this, participants' data was anonymised during interview transcription, so that all identifiable information was removed. Interview recordings, transcripts, and consent forms were stored in separate password protected files on my encrypted laptop drive. Transcription of the video recordings was facilitated solely by me, and each participant was allocated a participant number in the analysis write-up.

I informed participants that only my supervisors and I would have access to their interview transcript. Participants were also informed that aggregated data from all participants, and anonymised quotes from their interview, may be used in the research write-up and future publication of the research, ensuring that participants were not identifiable. As such, all data was treated in accordance with the Data Protection Act (2018) at all times. Video recordings and transcriptions will be destroyed after a period of 10 years, in keeping with the University of Essex research guidelines.

3.13.4 Risk of Harm to Participant

As participants were discussing personal and professional challenges that they faced during the pandemic, it was considered that participation in the study had a small risk of causing psychological distress. At the start of the interview, participants were informed of their right to refuse to answer any questions that they did not find comfortable. I monitored levels of emotional arousal and psychological distress throughout the interview, using my clinical skills. If a participant showed significant levels of distress, the interview would be immediately stopped, and support would be provided through signposting to relevant organisations and therapeutic support. However, none of the participants showed signs of distress during their interview, although some indicated feeling emotionally and psychologically distressed by their experiences. In these instances, participants were clearly aware of their distress and indicated seeking their own emotional and psychological support from therapeutic services. After the interview, each participant was provided a debrief and permitted space to reflect on their experience and ask any questions raised by their interview experience. This was permitted to ensure participants felt supported and listened to, and left in a similar emotional state as before participating in the study (Harris, 1988).

3.13.5 Risk of Harm to Researcher

Interviews were conducted over video conferencing, which mitigated risk to the researcher. It was considered that the interview topic also had potential to cause some psychological distress to the researcher, through hearing about participants' experiences. In consideration of my skillset and experience in my clinical role, it was felt that this risk was minimal, however the risk management plan (Appendix K) identified that in any such instances, I would discuss my thoughts and reflections with my university personal tutor, and through supervision with my thesis supervisors.

Factors such as age, gender, and perceived status – particularly my clinical role within the NHS - were recognised to be potential issues, where they created a power differential between the participants and I in some way. The importance of having awareness of these power differentials was in helping me use my reflective abilities to attempt to minimise the influence of these during interviews.

3.14 Dissemination

The research is planned to be disseminated to a range of stakeholders. Participants were given the choice to receive an electronic summary of the study results following completion of the thesis dissertation. All participants opted to receive this, therefore a summary will be completed and sent to participants. I also presented the research to the University of Essex School of Health and Social Care department at an annual Staff Student Research Conference. Additionally, as the research findings were likely to be of interest to other HCWs, I disseminated the study via a presentation to the clinical Multi-Disciplinary Team (MDT) on my doctorate placement. This facilitated discussions exploring the longer-term impact of the Covid-19 pandemic and overall workload on clinicians' wellbeing, for instance when considering backlogs of "routine" work since the pandemic, and an increased number of referrals to mental health services. I hope to summarise the research for peer-reviewed publication and poster presentation at an appropriate conference going forwards.

4 Results Chapter

4.1 Chapter Overview

This chapter will summarise the results of the study which produced six overall themes and 13 sub-themes. Demographic characteristics of the sample will be presented to contextualise the narrative of participants' stories. The themes and sub-themes found through reflexive thematic analysis (TA) will be presented, and evidence from the transcripts will be provided in the form of extracted quotes.

4.2 Demographic Information

Fifteen participants who had worked in a clinical role at a hospital setting during the pandemic took part in the research study. The sample was unevenly distributed in terms of sex, with three men and 12 women participating. Participants' ages ranged from 23 to 51, with a mean age of 37.5 years old. Two thirds of the sample identified as White British, with five participants identifying as being from a racialised community. Participants had worked in a variety of settings during the pandemic, including critical care units, accident and emergency (A&E) departments, adult and child mental health in-patient units, and general wards. The amount of time participants worked in a hospital setting during the pandemic varied greatly, ranging from those who worked occasional weekend shifts to supplement their main non-clinical role, to those who worked more than full-time hours throughout. As this was an initial study exploring the long-term impact of potentially morally injurious events (PMIEs) on moral injury (MI) and secondary mental health difficulties in UK health care workers (HCWs), a ranging quantity and quality of experiences was desirable. The pandemic context of individuals' experiences was also discussed within the interviews, as some participants worked in earlier surges, some later, and some throughout the entire pandemic. Despite the variety of which pandemic "wave" participants worked clinically in, they all felt the impact of working during the Covid-19 pandemic in significant ways. Participant demographics are displayed in Table 5 below.

Table 5

Demographic Characteristics of Participants

Participant Number	Age	Gender	Ethnicity	Relationship Status	Job Role (During Pandemic)	Job Role (During Study Participation)
P1	31-40	F	Minority Background	Single	Mental Health Support Worker	Mental Health Support Worker
P2	41-50	F	White British	Married	General Nurse	General Nurse Senior Midwifery Sister Professional Midwifery Advocate
P3	41-50	M	White British	Married	Lead Diabetes Specialist	Lead Diabetes Specialist
P4	41-50	F	White British	Single	Nursing Student (Start of pandemic) General Nurse (Later in pandemic)	General Nurse (Bank capacity) Lecturer in Nursing
P5	31-40	F	White British	Married	Occupational Therapist Lecturer in Occupational Therapy	Lecturer in Occupational Therapy Apprenticeship Programme Lead in Occupational Therapy
P6	41-50	F	White British	Married	Senior Critical Care Nurse	Senior Critical Care (Bank capacity) Lecturer in Nursing

P7	31-40	F	Minority Background	Married	Operating Department Practitioner	Practice Education Facilitator
P8	21-30	F	White British	Single	Junior Doctor	Junior Doctor
P9	21-30	F	Minority Background	Single	Deputy Ward Sister	Ward Manager
P10	21-30	M	White British	Single	General Nurse	Deputy Ward Manager/Charge Nurse
P11	41-50	M	White British	Single	Charge Nurse Senior Lecturer in Nursing	Charge Nurse Senior Lecturer in Nursing
P12	41-50	F	White British	Separated	General Nurse (Newly Qualified)	General Nurse (Bank capacity) Student in Mental Health MSc
P13	21-30	F	Minority Background	Single	Health Care Assistant	Mental Health Support Worker
P14	21-30	F	Minority Background	Long-Term Relationship	Mental Health Nursing Student	Mental Health Support Worker
P15	51-60	F	White British		Lead Lecturer in Occupational Therapy Occupational Therapist	Lecturer in Clinical Leadership & Professional Practice Occupational Therapist – Director of Practice Partnerships Trainee on Professional Doctorate in Health Education Practice

4.3 Overview of Findings

Table 6 below summarises the themes and sub-themes identified using reflexive TA by Braun and Clarke (2006). These themes and sub-themes are then presented in Table 7, which highlights the participants who identified with these themes.

Table 6

Main Themes and Sub-Themes

Perspectives on Morally Injurious Events	Inability to Process Whilst Firefighting
	The Felt Sense of Helplessness & Guilt
	Internalised Sense of Duty vs. Need to Preserve Own Health
Surviving Pandemic Pressures and Morally Injurious Events	Coming Together as A Team
	Only Other HCWs "Got It"
	Positive Comparison: Others Had It Worse
The Betrayal of the NHS	Delayed Implementation of Clear Guidelines, PPE, & Staff Wellbeing Support
	They Didn't Listen or Care
	Well Intended, Poorly Executed Staff Support
Betrayal by Government	
Managing Moral Injury	Acts of Resistance
	Channelling Energy to What Can be Helped
Navigating Post-Pandemic Life	Becoming More Introverted
	Changes In Emotional and Psychological Resilience

Table 7

Cross-comparison of participants by theme and subtheme

Participant Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Theme 1: Perspectives on Morally Injurious Events	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inability to Process Whilst Firefighting	*	*	*	*	*	*	*	*			*	*			
The Felt Sense of Helplessness & Guilt	*			*	*	*		*	*	*	*			*	
Internalised Sense of Duty vs. Need to Preserve Own Health		*	*	*	*	*	*		*		*	*	*		*
Theme 2: Surviving Pandemic Pressures and Morally Injurious Events	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coming Together as A Team		*		*	*		*	*	*		*	*	*	*	*
Only Other HCWs “Got It”	*	*	*	*	*	*				*		*	*		
Positive Comparison: Others Had It Worse	*	*	*	*		*	*	*	*	*	*	*	*		*
Theme 3: The Betrayal of the NHS	*	*	*	*	*	*	*	*	*	*		*		*	*
Delayed Implementation of Clear Guidelines, PPE, & Staff Wellbeing Support	*		*	*	*	*		*	*						*
They Didn’t Listen or Care	*		*	*	*	*	*		*			*		*	*
Well Intended, Poorly Executed Staff Support	*	*			*	*	*		*	*				*	*
Theme 4: Betrayal by Government				*		*			*		*	*			*
Theme 5: Managing Moral Injury			*	*	*	*	*		*		*	*	*		*
Acts of Resistance				*	*	*	*					*	*		*
Channelling Energy to What Can be Helped			*				*		*		*				*
Theme 6: Navigating Post-Pandemic Life	*		*	*	*	*	*		*		*	*	*	*	*
Becoming More Introverted	*			*	*									*	
Changes In Emotional and Psychological Resilience			*	*	*	*	*		*		*	*	*	*	*

4.4 Theme One: Perspectives on Morally Injurious Events

Participants were encouraged to share experiences of PMIEs from their clinical roles during the pandemic where they recalled a broad range of practices as well as specific incidences that constituted PMIEs. Many participants shared that they were unable to process these daily events psychologically and emotionally during the pandemic and could only begin to process events once they came out of *"survival mode"*. Some participants shared feeling a sense of helplessness at the gravity of protocols and practices that were beyond their control, as well as a sense of collective guilt in relation to if things could have been done differently to better support patients. Participants often expressed a burden of responsibility and duty, not only to their patients, but also to their colleagues, and this was juxtaposed against the need to preserve their own physical and mental health.

4.4.1 Inability to Process Whilst Firefighting

All participants shared initial feelings of shock, anxiety, and terror in response to the pandemic onset. They were necessitated to change their way of working overnight, in a landscape where everything was uncertain. Many felt unable to process what was happening as they were required to continue functioning and practically coping with the challenges of their work, whilst practices and protocols were constantly evolving throughout the pandemic. As a result, most described a lack of emotional and psychological processing of PMIEs during the pandemic as an automated and subconscious response, leading to a state of emotional numbness.

"I didn't think, it wasn't an active thought that I've got to close my mind off. It just happened subconsciously, it just automatically happened." (P6)

".... colleagues passing away here and there, people that I might work with on other wards. But it didn't feel real at the time, at the same time, there was an element of numbness. I think maybe that's just a coping strategy to sort of uh, head above water. I just didn't deep it." (P1)

Additionally, several participants shared that they consciously choose to compartmentalise emotionally laden work as a learned behaviour throughout their career, to help them manage their work without emotionally breaking down.

"14 years of seeing some pretty horrendous things has taught me how to compartmentalise... When you've got someone that's quite literally dying in front of you, you don't have the luxury of self-indulgence and emotional analysis. So, what I tend to do is I tend to put it in a little box, shove it to one side." (P11)

A few participants expressed negative self-judgement and guilt at their lack of emotional and psychological breakdown in the face of PMIEs. They appeared to fear their lack of emotionality and experienced a crisis of conscience. However, these states were temporary as participants did not appear to have internalised their critical self-judgements.

".... you feel 'oh my goodness, am I a cold heartless person?'... you know that you're not because you're doing absolutely everything, but I think it was just a case of 'let's not deal with it now, let's not try and analyse it now, let's just get on with the next one." (P6)

Several participants discussed different emotional states of fear, low mood, stress, and burnout, whilst acknowledging that they could not stop to examine these internal states but had to repress their emotions and keep pushing through in their work to care for their patients and support their colleagues.

"At the time you just close your eyes and get on with it, and just head down, straight in, completely petrified. But you just crack on and hope for the best." (P12)

Interestingly, a couple of participants expressed that their research interview was the first time they were able to start processing the events of the pandemic. Both these participants held senior positions within the NHS and had worked continually throughout the pandemic, and thereafter.

"I don't think there was, I've had time to even process. But probably speaking to you is the first time I processed everything that actually happened." (P3)

4.4.2 The Felt Sense of Helplessness & Guilt

Many participants reported feeling helpless and uncertain in the face of pandemic challenges and PMIEs. This was linked to unavoidable challenges brought on by the pandemic, as well as a lack of control over Covid protocols which they had to enforce but did not necessarily agree with, or that did not align with their values.

"...you're not in control of necessarily the visiting or things like that…you do feel quite helpless…that's what's hardest, not actually being able to make it better…forcing someone when someone is at the bedside of, the relatives are there, and they're saying, 'oh well I'm only outside, can't I just come in?'" (P8)

"…we were trying to rule out COVID. But then there were other factors that could have made that person critically unwell, such as COPD. So it was really, really tricky not to have all the answers." (P9)

Participants' MI appeared evident when sharing their distress for enforcing Covid restrictions on individuals with severe mental health difficulties, particularly where the patient group was adolescents. Participants acknowledged the necessity of Covid measures; however, they were painstakingly aware of causing iatrogenic harm through re-traumatisation of this patient group in an in-patient setting. They cited confinement of adolescents to their bedrooms for weeks at a time, preventing visitation of parents and families, and greeting newly admitted psychotic patients in full *"lab clothes"* PPE as causes of their moral conflict.

"If we had a new admission, they would have to isolate in their room for two weeks, which was really difficult, one because the young people might have been violent and aggressive and didn't want to be isolated in a room, and then also if they wanted to harm themselves, locking someone in a room isn't going to make that any better." (P10)

Participants expressed guilt around the impact of their own and colleagues' actions on patients and their families. This centred around inadequate staffing levels or staff who did not hold the right skillset for their new pandemic responsibilities. This included staff redeployed to critical care units and student nurses promoted to work as paid nurses throughout the pandemic.

"...I would say, a little bit of guilt that if I'd been with that patient and if I'd been looking after that patient, they would have had a slightly better chance, just because of my experience... They

[redeployed nurses] probably don't know that it could have been down to poor nursing care, and I don't think we let them know because there was no point…obviously feel real regret for the patient and the family member…you know you're just always thinking, 'could I have seen this coming?'" (P6)

Participants in leadership and management positions further expressed guilt in their actions towards the employees they supported.

"I was feeling a little bit guilty at the time, because I had a department to run, I had a queue of ambulances to process, I had a full resus, that I was kind of abandoning her [a student nurse] to it at that point anyway." (P11)

Feelings of helplessness reported by early career participants and participants in temporary bank or agency roles was linked to a lack of power in their positions. They spoke of being excluded from team discussions and decision-making, and wondered what the purpose of whistleblowing on poor practice was, when they felt unable to bring about change. Interestingly, most of these narratives were shared by female bank and agency workers who were from racialised minority backgrounds.

"…if a patient wasn't doing what she wanted, she would give them a little tap on the bum. I'm thinking, 'You don't do that to patients! You don't do that'. Like, if it was you in that position, how would you feel? That was kind of hard to see…there's not that many agencies and these are like basically permanent people…so it's like, 'Why are you talking? You're new here'." (P14)

4.4.3 Internalised Sense of Duty vs. Need to Preserve Own Health

In the context of their MI and subsequent negative emotions, many participants found themselves caught in a dilemma between their sense of duty and responsibility to their patients, and the need to protect themselves, and by extension their loves ones, from contracting Covid-19. For some, who were at high risk of contracting the virus and were supposed to shield, their sense of duty to their patients won, and they took decisions into their hands by choosing to go into work. Others could not be excused from working on-site and approached their work in a constant state of anxiety.

"I was really anxious, especially because I was living with my parents at the time and my father, who's type two diabetic, had had previous, you know, illnesses in the past. And so I knew that quite early on that those people could be impacted a lot more than the others. So I was really very anxious during those times." (P9)

Participants were further caught in a conflict between their sense of duty to their patients and the need to protect their mental health from burnout and MI. Some participants reported reaching a point where they were compelled to leave their roles, despite their sense of duty to the patient populations they served.

"...that's why I left A&E. I thought, 'I have to leave here' because it was feeling pretty toxic and I was burnt out, and I felt like I had to leave so I could fix myself and then move forward from there. I just feel a bit broken." (P12)

Most participants expressed compassion towards their colleagues and shared that their sense of duty extended to them as much as to patients.

“When I was asked if I’d do other shifts, I said yes, simply because it was (pause) I don’t know, it's difficult to explain. It's one of those things that you say yes to go help out your colleagues, because you know that if someone isn't there they're going to be struggling on alone, and so you just feel that camaraderie. You say yes, and you go and help out because you can.” (P11)

This was particularly reported by all participants in leadership positions, however with greater emphasis on feeling the burden of duty and responsibility to their employees, who they expressed a sense of protectiveness towards.

“…they [redeployed nurses] were completely out of their depth, so we could see them really struggling, they were like rabbits in the headlights, they were petrified, and so as a senior ITU nurse I had the responsibility of not only the patients but also of the redeployed nurses…my responsibility to them probably caused me the most anxiety.” (P5)

4.5 Theme Two: Surviving Pandemic Pressures & Morally Injurious Events

This theme summarises experiences that helped participants cope with the challenges of the pandemic. All participants expressed these experiences as relational in nature. Participants’ ability to function in their work and manage pressures was linked to provision of support and the wellbeing of their immediate clinical colleagues.

4.5.1 Coming Together as A Team

Most participants, though not all, shared that they experienced a sense of togetherness with their immediate clinical team. Many spoke about volunteering to work in departments with the majority of Covid patients to help their colleagues.

"It was quite hectic and full on, and intense, but we got through it, and I admire how much as a team we pulled through together, and that's one thing I will take away from this Covid situation." (P13)

Some participants shared that the support of their immediate clinical team was of utmost importance in determining how they would experience their work. Participants were generally able to cope with PMIEs better if they had supportive colleagues who could empathise with their experience.

"…they were such a good team and to support at the time on an ongoing basis, I think probably is the biggest thing for me - doesn't matter where you work, and that, it's not necessarily the case where I am currently and it has made me think do I go back to nursing…but I think it doesn't matter what situation you're pushed into, if you can, you know if you've got good people around you, it makes life a lot easier." (P2)

A few participants shared that their immediate managers were supportive of their needs. In these instances, managers were viewed as having the same shared values as the clinical team, rather than as professionals operating from positions separate to the team.

"…the manager was fantastic…she would like, pull us all aside at an appropriate time, sit us in the staff room and just make cups of tea all around and that sort of thing, just to get us away from what was going on for about five or ten minutes. She would do that at least once or twice a week." (P4)

A subset of participants expressed that they were supported to work within their competencies, even when changes in their clinical duties required them to acquire new knowledge and skills. What benefitted these participants' experiences was that their clinical supervisors held in mind their level of experience in real-life terms and put systems in place to upskill them as needed.

"…the ward I was in were quite good in that they understood, yes, we were there being paid to help the workforce, but we were still expected to be students…I heard this from other colleagues of mine that different wards were quite different, very much was 'you're in it now', whereas the ward I was on really worked hard to try and keep that balance as best they could, as often as they could." (P4)

Participants in leadership roles shared that they felt obligated and found purpose in supporting their team in managing their MI in the context of pandemic pressures.

"I knew these people, and listening to their stories in that first surge, that was distressing. But again, it added to my sense of purpose, as to why I needed to be there…I'd got together a reflective group, and interestingly, the staff turned up in abundance…what was really evident was they needed that opportunity to openly talk about it…" (P15)

4.5.2 Only Other HCWs "Got It"

The majority of participants felt best understood by their colleagues during the pandemic due to shared experiences and mutual challenges faced by HCWs. Some juxtaposed this to a sense of alienation and distance from their friends and family. They felt that their non-HCW friends and family could not grasp the realities of the pandemic, creating a sense of separation and loneliness from aspects of their experience that could not be understood. Importantly, a small subset of participants shared that they wanted to protect their children and loved ones from the realities of working on the frontline – viewing their naivety as a protective factor for their emotional wellbeing. At times, participants voiced frustration at the perceived inferiority of their friends and families' woes, as compared to challenges they were facing on the frontline.

"I didn't really confide much in my friends who're non-healthcare or non-frontline workers, because they'd be complaining about oh, you know that they, like one of my friends, she saw her adult children that day but she couldn't see anybody else because that was them and her husband, and that was the six of them, and I was like 'yeah but you've got to see them'" (P4)

A subset of participants informed that they only socially engaged with other HCW colleagues who they considered friends during the pandemic, even when national Covid restrictions were lifted to permit a degree of social engagement. This was linked to two reasons; having tighter social restrictions placed on them by the NHS than the public, or for fear of spreading the virus to vulnerable friends and family due to close contact with Covid patients. These participants expressed frustration at the disparity in their freedoms outside of work. One participant explained that they were advised against social activities outside of work due to their contact with severely immunocompromised cancer patients. These participants effectively sacrificed their own feelings of connectedness with others longer-term. Although they expressed frustration at the personal sacrifices made due to their job role, those who had made an active choice to continue restricting social activity appeared to be more accepting of their predicament.

“I even tried to arrange my fortieth, which was around the time that you could see six people, and I had to cancel that because we'd had a breakout at work, and we were advised not to see people, so, although there was a lockdown and the lockdown was lifted, all the restrictions we lifted, they weren't lifted for us, because remember, I was also working with cancer patients who were extremely vulnerable. I mean, anybody coming into hospital is vulnerable, but cancer patients are extremely vulnerable. So we were quite, quite tightly restricted.” (P4)

“I certainly don't hear from or see as many of my friends anymore, because everyone’s just kind of moved on with their life in their own way, and you know I’d have to get a lot of pressure saying ‘oh you need to come and visit’, and I say ‘well, no, I can't come and visit. You don't understand’, you know, because I have to cancel it, or I can't, or this or that, or you know I’m not allowed to travel on the train” (P4)

4.5.3 Positive Comparison: Others Had It Worse

Most participants shared stories about how they felt lucky to be in the position they were in, for various reasons, and justified this through comparison with other colleagues, loved ones, or society at large, who they felt were not in as privileged a position as them. This presented as a psychological coping method for getting through pandemic challenges. All participants who worked in critical care reflected that they felt lucky to have adequate PPE provision, as compared to their colleagues on general wards. Participants able to practice within their clinical competencies were grateful for their knowledge, skills, and experience, as compared with their struggling colleagues.

"…we had full PPE from hats, and two hats to goggles, face masks, uhh full FFP3 masks, full gowns, arm length gowns. We were very well looked after so; umm we were probably much better looked after than the nurses on the ward." (P6)

Some participants discussed having a supportive partner or family, whom they expressed appreciation for. Participants reflected that their supportive loved ones helped them to cope during this time. All expressed relief and gratitude to continue earning and supporting themselves and their families, as well as being able to socially engage with others through going to work, as compared to the public who were under isolation.

"…they were just hugely supportive, and they were so proud of what I was doing, that I was looked after when I got in, I didn't have to cook, they would cook for me, because I was a hero." (P6)

Some participants further expressed guilt for their relative privileges compared to other colleagues who were worse affected by the pandemic. For instance, one White British upper middle-class participant spoke about feeling guilty that their immediate family were of low risk for contracting Covid-19 and were able to thrive under Covid restrictions, whilst another compared their privilege relative to colleagues who had loved ones dying overseas and were not able to tend to them or attend funerals.

"I'm lucky because my parents…they're both medical…they weren't working though clinically at this time. They did later on go in and do some things, but they were quite protected…So I was lucky that way, and my brother, my sister, had work that could continue as well. So again,

it sounds really like guilty, that I didn't have to worry about a grandparent who was unwell, or other family members. I didn't have a loss which other people really sadly did." (P8)

"...nobody in my family that I know of that had passed away through COVID. Whereas people were coming to work and they've got their own relatives that just passed away in another country they couldn't get to, or you know, it was just, a lot of the doctors aren't English, so they were having to deal with that, not getting home to South Africa or wherever else, and they've got really poorly people back home and still caring for others" (P2)

4.6 Theme Three: The Betrayal of the NHS

This theme addressed how participants felt unsupported and let down during the pandemic whilst they were tackling huge patient demands in a constantly changing landscape. This sense of betrayal was directed at middle and senior management, as well as Trust executive teams and the NHS system.

4.6.1 Delayed Implementation of Clear Guidelines, PPE, & Staff Wellbeing Support

Many participants acknowledged that due to the unprecedented nature of the pandemic, there were no Covid guidelines, staff wellbeing support, or PPE available early on. Whilst participants acknowledged this initial challenge for staff at all levels of the organisation, many felt that support responses from the NHS and senior management were not fast enough given the severity and fast changing landscape of the pandemic.

"...the response was very delayed. Very, very delayed and it was inconsistent. And it wasn't clear, and we understand that like nobody...that we don't know much about it or something,

but at least like have some sort of accuracy in just, or not even accuracy, just a little bit like, just make sense in what you do know." (P1)

"The thing extra that I would have liked to have seen was more support for staff during the pandemic, so more counselling sessions available, more time for them to talk through issues as we went along not now that it's finished." (P6)

Participants in management positions discussed the stress burden that this placed on them to take onus and make decisions for their staff and patients, without backing from an evidence base, guidelines, or prior experience of a large-scale health crisis. This brought about a sense of betrayal from the NHS, where participants felt left to go out on a limb and potentially be questioned or penalised for their decisions later.

"Guidelines weren't available at that point, which made it a lot harder because you were very scared to make the wrong decision, actually, and then to be almost called up and asked to explain your decision especially later on…they were petrified and they wanted me to protect them from that, but actually I had very little experience of protecting them from it." (P3)

"…there was just not much clear guidance, and so people were doing what they could…people would just make up their own rules and try to just do their job as the best they could." (P9)

Some participants reflected that the disillusionment experienced by staff in their relationship with the organisation made it difficult for relational repair once wellbeing support was introduced later in the pandemic. There was a sense that this was too little effort, too late, when the organisation was perceived as causing their MI in the first place.

"There was a real crisis leadership that was being introduced. And I think that had almost turned people off. It was difficult to engage them. To suddenly now be asking how their well-being is when actually they felt it was the organisation that had induced this" (P15).

4.6.2 They Didn't Listen or Care

When participants reflected on the lack of equipment and staff wellbeing support, most felt that the NHS did not care about protecting staff's health and wellbeing. They expressed anger and betrayal by the lack of basic resources such as adequate PPE to carry out their work, as well as the lack of consideration for their emotional and psychological needs.

"…we weren't supported. Absolute pish. Umm, thinking about it makes me feel so (long pause) excuse my language, fucking angry because it was such a let-down, such a let-down. And I'm trying not to get too political, too much into politics but, the money is there. The money was there, and they just, it seems like they didn't care. It honestly seems like they just did not care" (P1)

Two thirds of participants felt this way due to being put in situations they were not comfortable with and being asked to perform duties outside of their competencies without adequate training and support. Participants felt this was ethically unsafe for staff and patients, suggesting presence of betrayal-based MI.

"…there was pressure for me to act and give things that I wasn't really sure of. I gave Piperacillin Tazobactam, it's called PipTaz, it's quite a strong antibiotic, and there wasn't a registrar there to say 'okay, that's a good one to give'. So I, under pressure with the nurse

saying, 'okay, what you gonna do, what you gonna do', I was like 'ok give this'…I was really it regretting after, because I felt that was the reason he got worse and it was in his lungs." (P8)

"They would just slap you with whoever, and then like, make me do things on my own that I've never done before. Like one, I have no knowledge, I'm not doing general nursing, and two, it's like, at least help me." (P14)

"…we were asked to work in areas that were unfamiliar to us…I had to go on to critical care a couple of times, because we had nobody else to cover, but we needed it. So we then became exposed to dilemmas that we'd never, ethical dilemmas that we'd never been exposed to before, as a profession." (P15)

They expressed adverse psychological impacts such as frustration, anger, and resentment towards middle management for making decisions concerning redeployment without listening to and accounting for staff's needs. This view was shared by participants who divulged symptoms consistent with mental health difficulties such as anxiety and depression, and those who did not, highlighting the psychological distress caused by PMIE exposure regardless of mental health status.

"…the shift pattern is different in theatres and different in ITU. So I had my son and he was I think, one year and a half at the time. And I had to pick him up from nursery, and I was saying, 'well, I can't stay for a long shift' and they were like, 'well, our patients don't suddenly get better at six o'clock'. You know, it's quite patronising and rude." (P7)

Participants who were in bank or agency roles discussed further lack of support and communication. This was linked to believing that the organisation viewed them as temporary and disposable and did not care about their wellbeing.

"So even the COVID huddle for some time, I think they were just bringing in permanent staff. But if you're working, there's like two permanent and there's like ten bank or agency or something like that. We're all working as a team, and some of us are booked in, like I'm practically permanent bank, I only went there and I was working all the time. We need to be a part of those discussions." (P1)

"I had roles in cleaning their bodies…That was really, really scary. I didn't know this was a part of the job role…I was shocked, and they were like, 'you shouldn't be shocked, because you're going to see this every day', and I'm thinking, 'no I won't, because I'm not doing general nursing', but at least be a bit mindful, you know? But they weren't." (P14)

Participants in management positions also discussed feeling unsupported by their seniors. They felt their senior managers were detached from the realities of clinical working and were only interested in clinical managers achieving the organisations' operational benchmarks. Subsequently, they felt caught between pressure from their bosses to achieve operational metrics and their moral duty to act in the best interests of their staff and patients.

"I had to really still keep pushing myself forward, even when I felt exhausted. So, and I think I got support from the team that I worked with, and I led. I wouldn't necessarily say I got support from any of my seniors. Again, I think that was a cultural thing. Um, I think you get to a certain

level in the NHS, especially when it's operational and strategical positions that you're expected to be very task driven, and drive forward what's expected..." (P15)

Some participants stated that the NHS lacked transparency in its communication of decision-making processes to clinical staff. They perceived that the NHS subscribes to a leader-centric model where decisions are made in rooms away from staff who would have to implement outcomes. As a result, staff felt disempowered and unheard. Interestingly, participants spoke about this issue in a broad sense, not limited to the context of the pandemic. One participant explained that the answer to organisational transparency and staff involvement perhaps lies in executive teams meeting with a broad spectrum of clinical staff, to make decisions together and close the hierarchical power gap.

"...there was a real divide, and there always is in these large organisations. So you'll have exec and senior level, they have conversations that people aren't privy to. And then you have my level, where we've got to implement things, but we probably don't know the full history, because we're not privy to the early conversations." (P15)

4.6.3 Well Intended, Poorly Executed Staff Support

Most participants acknowledged varying types and amounts of staff support that was put in place at some point during the pandemic. However, they reflected that the support was not aligned with staff's needs.

"I know the chaplain kept coming along to our staff room and quite a few people said 'I just wanna eat my dinner, I don't want to have a conversation' [laughs]. You know, you get that too, but they offered their services, put it that way." (P2)

Some participants felt that the support provided was not out of a genuine concern for staff wellbeing, but more as an operational metric so that the NHS Trust could be seen as supporting staff. There was a sense of cynicism at the utility of support provisions, where participants expressed that support appeared tokenistic and that the underlying causes of their burnout and MI went unaddressed.

"I was asked if I would see a Clinical Psychologist just to see if I was ok and she said it's an absolutely measured response for what you've kind of been exposed to, and no you haven't cracked up. So I thought, 'oh, that's a nice reassurance, thanks for that!' And she just signed me off, but it was almost like occupational health needed to do that so that we'd ticked the box." (P2)

Other participants expressed frustration at the bureaucracy involved in how the organisation allocated its resources, which they again felt was misaligned with clinician's priorities during the pandemic.

"...they have these pots of money for things, and they seem to not be able to change what they're going to be used for. So if they've got a pot of money that's for an art project, I've nothing against art...but in the middle of a pandemic it will be useful if you could use money, or I don't know if they did this, they might of, but reallocating resources would be quite good." (P5)

Some participants reflected that their organisation provided adequate staff support but cited barriers to accessing this, such as lack of communication with staff about the availability of support. They further cited that despite their willingness, they did not have enough time to attend support sessions due to their overwhelming workloads, pointing to wider systemic issues.

"…they had somebody, I think, from the other hospital came and said 'oh I'm a counsellor and I'm going to…' and I set her up in our coffee room and she said I'm here every other week on a Thursday for two hours and I'm going to sit in the coffee room and anybody can come in and chat to me. Nice idea, but it didn't work in practice because we were too busy to stop and chat and nobody really knew who she was, I happen to know because I happened to be there…the execution for that was wrong." (P6)

4.7 Theme Four: Betrayal by Government

Several participants expressed anger and a sense of betrayal from wider societal systems and the government for poor support of the NHS, its patients, and staff during the pandemic. Participants were angry at the governments' perceived lack of preparedness for a pandemic, such as the lack of maintenance of national PPE reserves.

"...anger mostly at the fact that we've been overdue for a pandemic for a while now. There's been plenty of modelling, plenty of tabletop exercises done since things like the Spanish flu after the First World War. We all knew that something like this was going to happen again. We've had a few false starts over the last 15 or so years. We had avian flu, and SARS, and MERS..." (P11)

Participants shared concerns that the government's agenda was not in alignment with population need, to the detriment of healthcare provision. Their sense of betrayal extended to the governments’ management of lockdown restrictions, which they felt led to preventable Covid infections and unfairly disadvantaged HCWs.

“I was probably angry at the whole politics of it all. Because I kind of felt if we were having to be governed so tightly, why wasn't everyone else? Because actually we were kind of defeating the object by having two sets of rules…made me quite angry because I was like ‘actually, a lot of those patients with Covid could have been prevented’, you know, cause then, obviously, if they come into hospital, then they’re spreading it within the hospital and then staff are going off sick and patients are becoming sicker.” (P4)

Some participants reflected that these systemic issues have been present for many years due to cuts in government funding. They conveyed that Covid simply exacerbated pre-existing issues and made them more visible in the public eye.

“We've literally spent the last 10 years looking at restrictive budgets and health and social care…knowing full well that we were going to reach a tipping point where something had to be done. And Covid I think, has sped that process, that deterioration in health and social care capacity. It’s accelerated that deterioration.” (P11)

One participant in a leadership role expressed concern for the cycle that Covid exacerbated – namely that HCWs experiences of stress, burnout, and MI from high patient to clinician ratios led more nurses to leave their roles, further perpetuating the problem by increasing burden on the remaining clinicians.

"A lot of my colleagues have left my emergency department over the last year. A lot of them stuck it through Covid, but they've now had enough…If Covid hadn't happened, would they still be working alongside me? Possibly...We're haemorrhaging nurses across the health service, and some of that is going to be because of what they've gone through in the last three years." (P11)

Several participants shared stories where a lack of appropriate staffing levels and equipment led to care failings of ultimately preventable health issues and death. Participants in senior positions recollected events where, because of staff shortages, they had had to leave junior staff unsupervised, leading to avoidable errors that caused patients' severe injury or death. In these instances, participants conveyed their own guilt for failing in their supervision of junior staff, whilst also holding space and compassion for the avoidable suffering that their junior colleagues experienced. These participants were able to look beyond their guilt to consider the wider systemic factors for these events, leading to the experience of betrayal-based MI.

"…it left me quite distraught that because of the staffing and the department I'd had to leave a, an experienced but still junior nurse looking after a challenging patient, I hadn't had the time to support her properly…and it was clearly a failing in her care, but it was also a failing in my ability to manage the department. But then again it sort of turned round into the 'well, why was I having to manage department with 50% of my staff as agency?'" (P11)

"…we had one patient who got so constipated that they had a bowel perforation and they died because of that. And I actually put that down to, not poor nursing care, but nursing who didn't know that that's what they had to do, because actually he was quite a well, he was getting better

from the Covid so he was then left with the less experienced nurses…so it wasn't deliberately poor care, but I think as a consequence of having an untrained ITU nurses" (P6)

4.8 Theme Five: Managing Moral Injury

All participants spoke about practical coping mechanisms to manage the general challenges of the pandemic, such as the increased volume of patients, additional responsibilities, and change of roles. These strategies included exercising, spending time with pets, going online to party and quiz applications with friends and family, and use of humour with colleagues. However, when sharing about their experiences of moral dilemmas, two key narratives that held meaning for participants was around acts of resistance and collective action, and a re-channelling of their energy to areas of work they felt able to make positive change.

4.8.1 Acts of Resistance

Participants encountered a wide range of moral dilemmas, for example, isolating vulnerable patients for long periods of time, rationing oxygen provision to breathless patients in clear need, and limiting patient contact with loved ones. Some participants discussed behaving in ways that pushed back against procedures and protocols during the pandemic. These acts were always carried out in the context of specific instructions and protocols misaligning with participants' sense of morality and were shared equally by participants in junior and management roles. These acts seemed to constitute a 'settling of scores' to these participants, that enabled their conscience to remain free from guilt in those instances. However, this was sometimes at the expense of worrying about the consequences of their resistance.

"…they were saying, 'it's fine, their saturations can be in their 80s to 90s, don't give them the oxygen'. To watch people struggling to breathe, that was awful…I don't care, I gave them the oxygen, I said, 'unless you put something in writing, I'm not doing that', because it just felt so wrong." (P12)

These acts of resistance were also expressed by participants in terms of advocating for patients when they felt specific procedures were lacking compassion for patients and their loved ones. Some staff spent additional time in their overfilled schedules contacting patients' families so they could say goodbye to their loved ones, or to personally deliver news of patients' deaths instead of leaving it to off-site clinicians who were not known to the patients.

"I would advocate for them and say, let them just ring their families, knowing that that would be the last time they spoke to them. So it was all very quick and 'let's get this done'...I mean the patients didn't know that was going to be the last time they spoke to them. But you know, we knew...I would say if they're going to intubate them anyway, they can wait a couple of seconds while they make a phone call." (P12)

A small subset of participants shared stories of resisting the status quo of protocols through collective action among their clinical teams, in the interest of their patient population. In these instances, participants reported causing effective change to practices in their departments.

"…that eventually didn't happen because of course, the colleagues that were pulled up and told off, they said, 'Well, there's no way we're going to get stuck rolling a patient when there's

a bleep. What if there's a paediatric emergency?' You know, 'there's no way'. So that stopped." (P7)

A couple of participants highlighted the importance of clinicians' awareness of their limitations and competencies. This was described as a prelude to being able to resist demands that posed moral or ethical risk from management.

"If someone had done it to me, because I know my professional limitations, you know your professional limitations, I would have said, 'I can't do this. This is not safe. These patients are not going to be safe with me taking care of them'. So this is important, I think, for healthcare professionals to be able to be assertive enough to be able to say what they're comfortable and not comfortable with." (P7)

4.8.2 Channelling Energy to What Can Be Helped

In the absence of moral repair, most participants had left their pandemic roles. Their decision to leave held meaning in terms of their individual resolutions following exposure to multiple PMIEs and experience of subsequent MI. This resolution applied equally to redeployed staff who went back to their original or alternative roles but felt that they would not volunteer or agree to be put in similar situations in future. Essentially, these participants felt they now knew better following their redeployment experiences, where they were pushed to operate outside of their clinical competencies.

"I felt like, you know, I'm giving this for the service, for the patients, but then I'm being treated badly by the managers. I really didn't appreciate how they were, and that contributed. It definitely contributed to me then leaving the department and leaving my clinical work and I

just felt like I'll be better off somewhere else, to be honest, where I can get less mistreated and that's what I did." (P7)

Participants who left clinical roles and went into academia felt that they were able do meaningful work and have a positive impact on the new cohorts of clinicians through teaching. They stated their preference for this as compared to risking their mental wellbeing through continued work in the NHS. They conveyed a keenness for training upcoming HCWs to have an awareness of the realities of working in healthcare and psychological resilience against the systemic barriers to staff wellbeing and patient care.

"where I am at the moment is, on a selfish level I'm quite relieved not to be in it. But I look with interest, and also try and apply that to our new healthcare professionals, who need that resilience, because that's essential for them. And I don't want newly qualified to go and have to hear some of the moral injury that the staff consider that they've been through." (P15)

"I've sort of channelled my frustration into 'I can't fix the wider systemic problems, but what I can do is help make sure that the next generation of nurses that coming in are a bit better prepared, that they've historically been'. So that's kind of my cathartic approach. I channel that into making sure that my colleagues and upcoming student nurses are better prepared for the job." (P11)

For other participants, meaningful resolution from their experience of MIEs and pandemic challenges came more in the form of refocusing some of their time and energy to having a better work-life balance. In essence, their pandemic exposures made them re-evaluate their wants and needs in an overall sense, balancing their personal needs and goals against their professional needs.

"…it was a bit like, 'Gosh, what's going on?', and so I made a lot of lifestyle changes, and it really helped me to obviously be in a better health, I suppose. So yeah, as a person, I think just making those lifestyle changes and thinking about what's important." (P9)

Over the long-term, participants re-evaluated their priorities and wants from their work roles. They appeared to have gained a better understanding of the type of work they enjoyed and were willing to do, their limits and boundaries, and a sense of their professional self-worth.

"I've moved from a role where I lead a lot of people, so I have a very small team under me now. And I made that decision that I didn't want to have to do that again, because there was a lot of responsibility, and I now have somebody I can look up to and ask lots of questions to if I need to, but I made that decision that actually it was better for my mental health to not have a huge team that I was responsible for." (P3)

4.9 Theme Six: Navigating Post-Pandemic Life

This theme addresses both the longer-term detrimental impacts of Covid, as well as positive areas of learning and growth. All participants expressed being in some ways changed by their experiences of the pandemic, however for some this expressed negatively whilst others held more positive narrative of psychological growth.

4.9.1 Becoming More Introverted

Most participants spoke about becoming highly anxious during the pandemic, for instance around cleaning and infection control practices and worrying about taking Covid home to their families. As a result, a couple of participants sought intervention from their general practitioner (GP) and were on prescription medication. A few participants spoke of ongoing long-term social anxiety once the pandemic crisis had been lifted. Participants spoke about finding it difficult to socially engage with others, citing that this felt more emotionally taxing that it used to be before the pandemic. This led participants to become more introverted and socially withdrawn, often choosing to forgo social engagements to spend time in their own company.

"I was a happily, joyous person, and then the whole COVID hit. And now, even though COVID is gone, I still feel like a completely different person. I feel like this whole thing has changed my whole mindset, the way I act around everyone, I now feel I'm more reserved, and I'm more in my own social bubble, which is me, myself and I. I don't socialise with people; I don't like going out." (P14)

"we've all got a bit more in our own little bubbles from Covid, because we didn't really have a choice, and I'm not sure we've quite got really that good at interacting and communicating with other people again yet." (P5)

Linked to this withdrawal effect was participants narratives around their personal relationships, which some described to be more distanced since the pandemic. This distancing effect occurred for one of two reasons among different participants. The first was that through the experience of prolonged time alone (e.g., in quarantine from Covid, or periods of home working), participants felt that their social needs had changed, such that they felt less need for social contact with others. The second reason was participants' descriptions of becoming more socially isolated through others' decision to withdraw from social responsibilities, such as grandparent's support in childcare duties.

"...before Covid they, every Friday my mother and father-in-law had the children, they took them to school and picked them up, and had them around tea. And even now they still don't do it again now, because it just kind of slipped out of the habit now. And um, yeah, and obviously they've aged, and things have happened, and so it's, they have them when I need them to, but not as much now. So it did have a massive effect on things like that actually. So yeah, they didn't see them for ages." (P5)

4.9.2 Changes In Emotional and Psychological Resilience

Many participants expressed feeling emotionally and psychologically depleted, leading to self-reported burnout, or PTSD symptoms such as nightmares. They felt that the pandemic had left them psychologically less resilient long-term.

"I've just had a bereavement in my family which I really haven't coped with, and actually I am relating it back to the stresses of Covid. I would normally have related, coped with this family situation in a lot better way, and I'm surprised at how I'm not, and I am relating it to the trauma that we went through in Covid. Now I would say it is, it is post-traumatic stress disorder, we are absolutely traumatized by what we saw and what we went through, and it is definitely affecting my everyday life now. Without a shadow of a doubt." (P6)

To address the mental burden, a subset of participants had sought psychological therapy either during or post-pandemic. They named support from either national initiatives of psychological support that was set up for HCWs during the pandemic, or through alternative provisions. However, therapeutic interventions tended to be more short-term and focused on practical coping strategies, but participants did find these to be helpful.

"I did do like a short CBT thing via text that my GP had referred me to, um, which is basically giving me coping strategies to help with the anxiety, which was helpful." (P4)

"...that was a service that was created for people working on the front line. You could phone in and have therapy sessions, which, that was quite helpful. So I accessed that..." (P12)

In contrast, a small subset of participants described feeling more psychologically resilient because of the pandemic. For these participants, it appeared that a large degree of flexibility had been required in their approach to managing their pandemic work and its associated challenges. These participants held the view that the pandemic provided them opportunities to showcase their resilience and felt that growth comes out of struggle and resistance.

"I think it's made me more resilient in some ways. I know we use that word a lot, but actually at work I'm not sure if I'd have got the opportunities that I've had recently, if it hadn't been for the pandemic, because I kind of got to show people what I could do and what I could cope with." (P5)

“It's very much like a forging process, you know, in order to make high quality steel, you have to get the metal quite hot. So you know there have been times in the past where I have been burned. But having said that, it generally has made me a better, well at least I hope it's made me a better nurse, or made me a better lecturer, or just made me a better person…when you come across significant events, there are two approaches, you can let it beat you up and put you down, or you can stand back up and push back.” (P11)

5 Discussion Chapter

5.1 Chapter Summary

This chapter presents a discussion of the results from the study. Each of the six themes will be summarised and considered in relation to the research questions and relevant psychological literature. Following this, the strengths and limitations of the study are reflected on, and implications and recommendations for further research are offered. Finally, a reflexive account from the author will be provided and followed by a conclusion.

5.2 Perspectives on Morally Injurious Events

The first theme related mostly to the question of how healthcare workers (HCWs) experienced potentially morally injurious events (PMIEs) and the immediate impacts of these experiences. Participants spoke about the unconscious process of emotional numbing; a common symptom of post-traumatic stress disorder (PTSD; APA, 2013) which protects the individual from feeling the full force of a perceived threat (Bracha, 2004). The ‘shutting down’ of emotions involves the brain’s amygdala signalling the hypothalamus to stimulate the parasympathetic nervous system into the “freeze” part of the well-documented fight, flight, freeze, fawn, and flop responses (Bracha, 2004). This bodily response permits temporary relief, which participants reported, where they were able to continue functioning as normal. Following trauma, the amygdala signals the nervous system that the perceived threat is gone, allowing the individual's ability to process positive and negative emotions to return (Bracha, 2004). However, prolonged emotional dissociation can lead to changes in mood and cognitions associated with the traumatic event, as well as prolonged psychological distress (APA, 2013). As such, it is important that HCWs are not in a state of chronic "threat mode", to prevent a full PTSD presentation. The study findings suggest that whilst some HCWs experienced emotional numbing as a short-term psychological response to increased PMIEs during the pandemic, others experienced this irrespective of the pandemic as a means of coping with the morally challenging burdens of their work. This latter sub-group of participants' narratives perhaps presents the biggest concern, and reinforces literature evidencing NHS staffs' traumatic experiences of daily "firefighting" in their work (Dominic et al., 2021; Luce et al., 2023). Wider literature suggests that this state of constant threat and emotional suppression may lead to the experience of depersonalisation associated with burnout (Khamisa et al., 2013), and compassion fatigue (Xie et al., 2021). These outcomes identify a duality of concern for both HCWs and patients (Rupert et al., 2015), and hold implications for healthcare organisations' cohesiveness, productivity, and capacity to provide high quality patient care.

Participants discussed their helplessness at the gravity of the pandemic, as well as their lack of control over new protocols which they had to enforce, but that did not necessarily align with their values. Emerging literature identifies loss of control as an early pandemic response, and helplessness as a peak crisis response (Ardebili et al., 2021). Helplessness was reported more by female early career participants and temporary workers such as bank and agency staff, most of whom were from racial minority backgrounds. This can be partly explained by a review on moral distress in healthcare assistants which identified helplessness as linked to staffs' perceived powerlessness in the healthcare hierarchy (Rodger et al., 2019). Given the power structures within the NHS, junior and temporary staff are often excluded from discussions and decision making around patient care, and must simply carry out decisions made by more senior staff (Rodger et al., 2019). Inevitably, some of the decisions made will go against clinicians' values regarding patient care, thus presenting as a PMIE (Rodger et al., 2019). Whilst this power differential and subsequent feelings of helplessness have always been present in healthcare hierarchies, it is likely that helplessness was experienced to a greater extent by these staff due to the exacerbated frequency and range of PMIEs brought on by the pandemic.

However, differences in power can operate in many other social identities besides professional rank and can perhaps be more holistically explained by the theory of intersectionality (Crenshaw, 1989). With an intersectional lens, we can consider that participants reporting greater feelings of helplessness occupied multiple oppressed social positions, namely that of the female gender, belonging to racial minority background, and lower professional rank. The way these intersectionalities collide may account for greater feelings of helplessness experienced by this sub-group of participants, given ingrained structural racism (Naqvi et al., 2022; NHS England, n.d.) and gendered organisational structures and norms in the NHS (Regenold & Vindrola-Padros, 2021). This is an interesting consideration, as much less is known about the experiences of HCWs occupying multiple oppressed identities during the Covid-19 pandemic in the NHS.

Participants shared their moral conflict and guilt at enforcing Covid restrictions on patients. These incidences where HCWs were unable to provide person-centred care necessitated by crisis times manifested as a PMIE, evoking guilt. For instance, participants acknowledged the likelihood of causing iatrogenic harm through re-traumatisation by preventing adolescent psychiatric inpatients from seeing their parents and confining them to their bedrooms for weeks to prevent the spread of Covid-19. This finding is similar to that reported by Liberati and colleagues (2021), whose participants reported guilt resulting from similar experiences.

Feelings of guilt were further expressed by participants in management roles who perceived failings in their management of staff under their care. As such, moral injury-related (MI) guilt permeated the HCW hierarchy at every level of seniority. Fortunately, while some participants expressed guilt at their actions (i.e., commission or perpetration-based guilt) or inactions (i.e., acts of omission) related to events, these did not appear to be internalised to more global self-assessments. Thus, self-evaluations of "I did something bad" (Kubany & Watson, 2003) did not appear to lead to shame and internalised negative beliefs and global self-condemnation (i.e., "I am bad"; Tangney et al., 2007). However, as most participants had left their pandemic roles, one might wonder if their global self-assessments might have been impacted had they remained in the same work settings, under prolonged exposure to PMIEs.

Participants shared their moral conflict between their want and compassion to serve their patients, and the survival of their own physical and mental health. This is a long-standing conflict that HCWs have faced under NHS austerity measures (Talbot & Dean, 2018). Participants further expressed a sense of duty to their colleagues, and this was endorsed to a greater degree by participants in leadership positions. The sense of duty to patients and/or staff they served presented as a core part of their professional identity, undoubtedly due to their legal obligation to a duty of care (e.g., Royal College of Nursing, 2015). Even when considering the role of clinicians not regulated by professional bodies (e.g., support workers, or healthcare assistants), the duty of care framework is encouraged under best practice guidelines (Royal College of Nursing, 2015), and therefore may be internalised as a core part of the workers' professional identity (Hawkins, 2005). Malm and colleagues (2008) explain duty of care as a special positive moral duty that arises from the relationship between a HCW and their patient. This duty is thought to have two key characteristics; first, that it is role related and signified by an overt acceptance of the duty, and second; it can obligate the HCW to incur greater risk in carrying out the duty than might be expected of others (Malm et al., 2008).

During the pandemic, the duty of care mandate was reinforced through public and media narratives such as “Healthcare Heroes” (Cox, 2020, p. 511). Although this narrative and weekly clapping for healthcare staff was intended as a gesture of gratitude, this invariably added to the burden of duty and responsibility (Cox, 2020), which left some participants feeling patronised and frustrated. As the duty of care is neither limitless nor fixed (Simonds & Sokol, 2009), it may be ethically dangerous to rely on it as a moral justification for the extent to which HCWs must subjugate their own health needs for their patients during pandemics (Sokol, 2006). Cox (2020) therefore argues that the heroism narrative supresses meaningful discussion about the obligations under which HCWs must work, as well as the limits of this duty of care, which remain to be critically examined.

5.3 Surviving Pandemic Pressures and Morally Injurious Events

This theme considers HCWs’ perspectives on how they were able to cope with the challenges of the pandemic, as well as the interplay between their work and family lives. Participants often spoke with compassion about their immediate clinical colleagues and perceived the support of their immediate colleagues as a major factor in how they experienced their work. This is in keeping with social identity theory (Tajfel, 1979), in which one’s sense of identity, self-esteem, and social belonging are based on group membership. Indeed, participants’ degree of contact with their clinical teams, sense of shared purpose and mutual experiences placed them as members of an in-group, leading to increasing liking, compassion, and tolerance for other members of the group (Montoya et al., 2008; Rand & Wexley, 1975). This sense of camaraderie with colleagues may further be explained by the "befriend" component of the tend and befriend theory, which considers that pro-social behaviour and affiliation with others helps individuals cope with threatening circumstances (Taylor et al., 2000; Taylor & Master, 2011). This likely led to participants' motivation to volunteer in other departments such as critical care, to help colleagues. To note, participants who felt their immediate managers were supportive of their needs viewed them as part of the in-group, highlighting the importance of supervisors and managers being aligned with and upholding group goals, analogous to the fight or flight basic assumption theory (Bion, 1950).

Some participants juxtaposed their sense of camaraderie with their colleagues, based on facing mutual challenges, against a sense of alienation and distance from friends and family. Interestingly, a small subset of participants felt that their loved ones' naivety of the realities of working on the frontline was a protective factor for their emotional wellbeing, and something they wanted to sustain. This finding perhaps echoes the flip side of a pandemic study that highlights the impact of HCW family members' experience of hearing about traumatic experiences, and the failure of healthcare organisations to meet the needs of HCWs (Tekin et al., 2022). Participants spoke of personal sacrifices to restrict social engagement with extended family and friends due to close contact with Covid-19 patients and tighter restrictions on HCWs once out of lockdowns. Curiously, these participants spoke as though they were unique in this sacrifice due to the nature of their roles, perhaps not considering how non-HCWs may also have needed to sacrifice social connectedness to others for various reasons (e.g., living with family members vulnerable to becoming severely ill from contracting Covid-19). Nonetheless, these findings echo other literature on HCWs pandemic experiences (Bender et al., 2021) and highlight the wider pressures that HCWs were under outside of their immediate work setting, which impacted their overall mental health and wellbeing.

Interestingly, participants' gratitude for their privileges during the pandemic relative to colleagues or the public presented as a contradiction to some of the same participants' views that they had to make greater social sacrifices. This may perhaps speak to participants' experiences at different points in the pandemic. Irrespective of the reason for participants' relative 'luck' and privilege, this presented as an unconscious psychological coping method for helping participants manage their difficult work experiences. This phenomenon can be explained by the theory of downward comparison (Wills, 1981). The theory posits that individuals experiencing negative affect which cannot be readily fixed through instrumental action, enhance their subjective well-being through conscious or unconscious comparison with a less fortunate other (Wills, 1981). For the participants, this comparison appeared to serve the purpose of re-balancing the subjective pros and cons of their predicament, allowing them to continue functioning and engaging with their work in the immediate term.

For some participants, an awareness of their relative privileges led to feelings of guilt. This survivor's guilt is similar to the concept of 'survivor syndrome' which was first described in observations of Holocaust survivors (Niederland, 1968). Survivor's guilt is a common experience in survivors of traumatic events where others have died (Murray et al., 2021), and was previously considered a symptom of PTSD (APA, 2000). Guilt acts as the self-conscious affect and moral emotion characterised by negative self-appraisal and a sense of responsibility for the death or injury of others, even when the person has no real power or influence in the situation (Tangney & Dearing, 2003). More recently, survivor guilt has been associated with the MI of a broad range of traumatised groups, including military veterans (Currier et al., 2015), refugee populations (Bemak & Chung, 2017), terrorist attack survivors (Aakvaag et al., 2014; Mallimson, 2004) and survivors of mass-casualty accidents (Hull et al., 2002). Although no longer a part of PTSD diagnostic criteria (APA, 2013), survivor's guilt remains a common post-traumatic experience (Murray et al., 2021). In the context of the pandemic and HCWs constant exposure to the reality of the war against a virus, in addition to media reports of rising death tolls, it is perhaps an unsurprising paradox that some participants' privileged positions left them with feelings of guilt weighing on their mental health. The evolutionary basis of guilt serves to connect us to others in a meaningful way through impulse control of our need for self-gratification and maintains our moral code by reminding us of the social implications of our actions (Iyer, 2020). As such, guilt is not necessarily a bad thing, however the experience of excessive guilt for incidents outside of one's control are counter-productive and may be a manifestation of secondary traumatic stress (Iyer, 2020).

5.4 The Betrayal of the NHS

The third theme encapsulated the ways in which participants felt let down by the NHS institution. Participants expressed that the NHS response to the pandemic was not quick enough given its fast-changing landscape. Whilst participants clearly showed understanding and compassion during a time of mass panic, they perhaps overlooked their employer's legal duty of care to them, to provide adequate material and a safe system with effective supervision (Witting, 2001). Given that HCWs were continually exposed to significant risk of Covid-19 infection, PPE provision constitutes a basic tool which HCWs can reasonably expect to be provided with, consistent with the World Health Organisation's guidelines for treatment of infectious diseases (WHO, n.d). As such, participants' accounts of delayed or inadequate provision of PPE and clear guidelines surrounding use of PPE brings forth questions of NHS negligence (Chan, 2021).

Participants in management positions recalled their fear and anxiety at having to make decisions for their clinical teams and patients in the absence of adequate guidance from the NHS, an evidence base, or prior experience of a large-scale pandemic. These views are likely transferable to the experience of NHS clinical managers more broadly, as other documented accounts of NHS HCWs highlight “there’s been no guidelines, it’s chaos”, “we are literally making it up as we go along” (Horton, 2020, p. 1022). Participants’ disillusionment in their relationship with the NHS maps onto findings from Hegarty et al.'s (2022) study, which stipulated participants’ perceived deterioration in the standard of care provided by the NHS, compounded by patient backlogs, and resource and staff shortages. Despite these difficulties, one might consider the innovation that can take place from such improvisation of practice during times of crisis. This can include a sense of collective identity and increased cooperation among HCWs that is not limited by professional affiliation, characterised by high levels of stress and uncertainty (Wiedner et al., 2020).

Participants felt that the NHS did not care for the wellbeing and needs of its staff, compelling them to work in ethically unsafe ways such as through redeployment to unfamiliar areas of clinical work without adequate training and support. This was suggestive of the presence of betrayal-based MI. The shift in the ethical climate of healthcare systems from person-centred care to a more utilitarian task-oriented model of care is perhaps unavoidable at times of crises with increasing patient volumes (Bayerle et al., 2022). However, it effectively traps HCWs between evermore diminishing resources and expanding targets (McCann et al., 2015) in the context of Covid-19, with MI as the result. Whilst this is a pragmatic response to a public health crisis, participants’ narratives shed light on the high personal cost of reconciling these value systems, which has resulted in burnout (Liberati et al., 2021), feelings of helplessness, guilt, cynicism, and desire to change career direction (Patterson et al., 2021). The findings suggest that HCWs were not prepared to compromise their moral values to readily sacrifice person-centred care for the greater public good.

Participants who were not in permanent employment, such as bank and agency workers, felt that the NHS viewed them as disposable and not worthy of effective communication and support. In broader literature on the experience of agency nurses, this has been documented as a long-term systemic issue (Simpson & Simpson, 2019). The literature indicates that whilst there are advantages for nurses to work as agency staff (e.g., flexibility and control over shifts permitting a better work-life balance; Batch & Windsor, 2015; Schubert, 1995), the downsides include feeling isolated and excluded from team camaraderie (Ronnie, 2020), requests for support being ignored (Ronnie, 2020), lack of opportunities for in-house training (Tailby, 2005), and being assigned patients that are mis-matched to the worker’s abilities, with no one taking the time to find out their competencies (Fitzgerald et al., 2007). One can perhaps assume that the impact of these systemic issues on bank and agency workers was exacerbated during the pandemic, given the increased prevalence of PMIEs. Participants felt that the NHS was not transparent in its decision-making, describing that decisions for the majority was made by a minority of senior executives who did not share their decision-making processes with the staff who would have to implement outcomes. These perspectives again highlight pre-pandemic issues within the culture of the NHS hierarchy, which has been described as “top down”, “oppressive”, “uncaring”, “defensive”, and “bureaucratic” (Pope, 2019, p. 57).

Whilst most participants reported different types of staff wellbeing support that was made available to them, they felt this support misaligned with their needs and cited several barriers which prevented them from accessing the support. These findings may be transferable to the experience of other NHS HCWs when attempting to access wellbeing support, and is supported by emerging literature on 18 NHS Trusts' staff experiences of wellbeing support during the pandemic (Clarkson et al., 2023). Clarkson and colleagues (2023) highlight several factors (e.g., lack of time) as barriers to accessing mental health and wellbeing support, in addition to factors concerning the organisational culture (e.g., poor line management) and socio-political context (e.g., stigma regarding mental health). These experiences made some participants feel frustrated and cynical at the efficacy of support provision, expressing that it would benefit the image of the Trust more than helping its burnt-out staff. The betrayal-based MI that staff experienced can be explained by largely unaddressed workforce shortages (The Health Foundation, 2020; The King's Fund, 2021) that translate to overwhelming workloads for individual clinicians, with current NHS vacancy rates at 1 in 10 full-time equivalents (NHS Digital, 2023). This is despite strategic plans such as the 2019 NHS Long Term Plan (NHS, 2019) and the 2020/21 NHS People Plan (NHS, 2020), which identify staff support and wellbeing as an organisational priority. In the face of these well-known systemic problems, mental health and wellbeing support will likely offer short-term benefit to staff, but essentially act like a sticking plaster provided by the agent of a deep moral wound (Wrenn, 2022).

5.5 Betrayal by Government

This theme encompassed participants' perceptions of betrayal from a wider socio-political lens. Participants were angry at the governments' management of the pandemic, although perhaps not surprised, as they acknowledged the governments' long-term lack of support of the NHS in tangible ways. They felt that these long-standing issues had simply been exacerbated and become more visible because of the pandemic. This included NHS austerity measures dating back to the Cameron-Clegg coalition government (The King's Fund, 2022), resulting in continued cuts to the public purse against rising population demand (Charlesworth et al., 2021). As such, participants felt betrayed by the government for shortages in staffing levels and equipment which brought about preventable care failings. This view has been echoed by other NHS clinicians across social media platforms – for instance one NHS staff member communicated “It feels as if we are actively harming patients” (Horton, 2020, p. 1022). These experiences make a strong case for the presence of betrayal-based MI, leading some HCWs to industrial strike action (BMA, 2022). Participants expressed that Covid-19 exacerbated a cycle of HCWs burnout and MI, leading to higher rates of attrition. This pattern can be seen in the ongoing UK nursing crisis (Gilbert, 2023). This finding indicates the pre-pandemic state of the NHS impacted on HCWs ability to cope with PMIEs during the pandemic (Deakin, 2022).

5.6 Managing Moral Injury

This theme encapsulates two key narratives around participants’ management of MI. The first comprised of participants’ decision to engage in either individual or collective acts of resistance. This appeared to be an area of growth in their identity through repeated exposure to PMIEs. The second meaningful management of MI concerned participants’ re-channelling of their energy to alternative work where they felt able to make a positive impact. These experiences were consistent with a view of MI as “the perceived violation of one’s own professional integrity and obligations and the concurrent feeling of being constrained from taking the ethically appropriate action” (Lamiani et al., 2017, p. 51).

Although literature indicates that typically those in a higher position of power, such as managers, should feel more able to resist and dissent from the status quo (Battilana, 2011), the findings of this study contradict this, and evidence that HCWs across a broad range of seniority were able to resist direct instructions, where their sense of moral duty came under fire. However, it could be argued that resisting the status quo may have been harder for less senior staff and for those in temporary positions due to their relative lack of power. In the case of this study's participants, it appeared that their interpretation of the situation as something that went against their moral values led to their subsequent acts of resistance. Wider examples of participants' collective acts of resistance can also be seen in recent doctors, nurses, and ambulance workers industrial strikes (Mahase, 2022; Oliver, 2023). This phenomenon is comparable with the observation that whenever people have been treated badly throughout history (e.g., through violence or oppression), they resist (Wade, 1997). These acts of resistance, dubbed oxymoronically as "small acts of living" are in fact quite significant and potentially threatening to the clinician. One participant's decision to give oxygen to Covid patients who were struggling to breathe, against instructions to wait until patients' oxygen levels were lower (due to the need to ration oxygen), exemplifies a time when such an act of self-assertion may be met with negative repercussions for the individual clinician. Wade (1997) considers that whilst acts of resistance in no way preclude acknowledgment of the harm caused, they permit individuals to maintain a sense of their dignity and value, and to perceive themselves as stronger and more capable of responding to difficulties.

A longer-term outcome of participants' experiences concerned gaining an awareness of the boundaries of their competence and limitations as an important factor in being able to resist instructions that posed moral or ethical risk from their superiors. These findings are congruent with evidence from pre-pandemic literature that indicate when caught between incompatible demands of business efficiency and patient need, HCWs choose to maintain the integrity and ethics of care for patients (McCann et al., 2015). These competing system needs can be incredibly problematic for HCWs, who often "can't do both" and must act as "street-level bureaucrats" in seeking the best treatment for patients (McCann et al., 2015, pp. 33, 36). This can include ignoring, breaching, working around, or else fudging the technical demands of performance management metrics (Hyde et al., 2009). This points to the strong sense of morality and public service values in HCWs, who predominantly believe that patients are their organisation's first priority (NHS Employers, 2023).

Participants' experience of MI led most to leave their pandemic roles. Whilst this constitutes as a positive for HCWs, leading to individual reparatory action, this is bad news for the NHS, where attrition rates continue to rise (NHS Digital, 2022). As HCWs from marginalised ethnic groups make up nearly a quarter of the NHS workforce (NHS England, 2023a), it is important to understand contributory factors to the attrition of these staff, in the context of structural racism (NHS England, n.d.), unequal career progression, and pay gaps (Woolf et al., 2023). The NHS 2022-23 business plan, which sets out key commitments to help the NHS respond to its challenges, states its aim to "support the NHS attract and retain more people, working differently in a compassionate and inclusive culture" (NHS England, 2022). To address this aim, the NHS should include an intersectional analysis of why staff from marginalised groups may be more or less likely to leave.

5.7 Navigating Post-Pandemic Life

This theme constitutes the longer-term effects of Covid-19 which ranged from positive learning and psychological growth to mental health difficulties and increased psychological fragility. Whilst most participants described short-term anxiety around virus contamination, for a small number of participants this became a long-term concern leading to safety behaviours. A few participants further discussed social anxiety resulting from a change in what they perceived their social needs to be after long periods of isolation. These participants' felt that they had learned the skill of solitude: to be at peace with themselves (Banerjee & Rai, 2020). However, others described becoming more isolated through others' decisions to withdraw from social contact. In these instances, individuals can experience loneliness, boredom, and isolation (Banerjee & Rai, 2020) which may be accompanied by practical burdens. This is problematic due to the known association between experiences of loneliness and poor mental health (e.g., depression; Wang et al., 2018), alcohol abuse (Canham et al., 2016), and physical health disorders (e.g., migraines, diabetes, osteoarthritis; Christiansen et al., 2021; Mushtaq et al., 2014). These research findings are in line with the evolutionary theory of loneliness, which suggests that individuals have an innate desire for connection to others as a means of protection from potential threat (Cacioppo & Cacioppo, 2018). Loneliness results due to unfulfilled social connection; and in the pandemic context it prevails even when individuals choose to reduce their social contact due to fear or risk of infection (Keller et al., 2023). Subsequently, this may lead to avoidance of social contact and changes in perception to view social interaction more negatively (Keller et al., 2023).

Over the long-term, participants felt that the pandemic had left them psychologically less resilient, which contrasted to the resilient professional identities typically held by a broad range of healthcare disciplines (Han et al., 2022; McCann et al., 2013; Roslan et al., 2022). Participants tried to remedy this by seeking various forms of short-term psychological support. In contrast, a small minority reported increased psychological resilience following the pandemic. These individuals viewed pandemic pressures more favourably as opportunities where they could showcase their potential and grow out of struggle. This is unsurprising considering literature on psychological resilience that identifies acts of coping (Mayordomo et al., 2016), adapting, or thriving in the context of adversity as core components of resilience (Fletcher & Sarkar, 2013). Resilience is further considered as a protective factor for individuals' well-being (Schultze-Lutter et al., 2016) and has been inversely associated with the experience of anxiety, depression (Yi et al., 2020; Zhang et al., 2020), and burnout (Guo et al., 2018). These participants only reported short-term anxiety and isolation which lasted for the duration of the pandemic crisis.

A systematic review and meta-synthesis of 121 qualitative studies on the experiences of resilience among HCWs during pandemics identified six themes: moral purpose and duty, connections, collaboration, organizational culture, character and potential for growth (Curtin et al., 2022). In some of the studies in the review, HCWs positively adapted and grew in their personal and professional practice, despite adversities (Curtin et al., 2022). This was helped by strong leadership, clear communication from managers, social support from colleagues, and supportive working environments (Curtin et al., 2022). The meta-synthesis of results shows that HCWs held a strong sense of duty, which related to their sense of professional identity and responsibility as care providers. HCWs reported that their resilience was aided by working environments where their views were considered, and they were involved in decision making processes by supportive leadership (Curtin et al., 2022). This is in line with literature highlighting the importance of psychologically minded managers (Brooks et al., 2018; Greenberg et al., 2021).

Theories of resilience highlight the importance of such "ordinary magic" as opposed to extraordinary individual characteristics that enable psychological resilience (e.g. Masten, 2001, p. 227). Additionally, these theories collectively consider that resilience is not a fixed state, but rather a fluctuating process across time and different domains, dependant on life events and resources (Bonanno, 2004; Masten, 2001, 2014; Masten & Tellegen, 2012; Southwick et al., 2014; Wright et al., 2013). Given the litany of PMIEs that participants were exposed to during the pandemic, predominantly in the form of systemic issues, such as exclusion from decision making, it is perhaps unsurprising that most participants identified negative long-lasting effects of the pandemic analogous to betrayal-based MI.

5.8 Summary

In summary, the study’s findings add to and strengthen outcomes from the existing literature, suggesting that betrayal-based MI presents a greater concern for the wellbeing of HCWs than commission-based MI (Denham et al., 2023; French et al., 2022; Hegarty et al., 2022; Williamson et al., 2022). The study replicated the finding that when left unresolved, betrayal-based MI experienced during the pandemic led to HCWs’ decision to leave their roles for alternative clinical posts, or to leave the NHS entirely (Denham et al., 2023; French et al., 2022; Hegarty et al., 2022). A novel finding from this study was that commission-based MI in the context of the pandemic presented as less of a concern to HCWs mental health and wellbeing over the long-term, as participants did not appear to internalise guilt from their actions or inactions to negative global self-assessments. Evidence from wider literature on the functionality of guilt suggests that guilt is likely to be experienced short term if perceived to be following negative or traumatic events that are “acts of God” and outside of human control (Kubany & Watson, 2003, p. 62). Therefore, the short-term guilt experienced may be linked to HCWs’ acknowledgement of the unprecedented nature of the Covid-19 pandemic, and their limited control in this overall. However, this is a provisional premise that needs to be fully investigated.

A novel discovery from participants of minoritised communities was that these HCWs appeared to present with a greater sense of betrayal, defeat, and helplessness. Furthermore, most of these participants held temporary bank or agency roles. This suggests a need to understand the experience of those with multiple oppressed social identities in the context of the Covid-19 pandemic in the NHS. A survey study on ethnic disparities in workplace risks of Covid-19 among UK health and social care workers found inequalities across several workplace hazards (Kapilashrami et al., 2022). For instance, minority ethnic HCWs within lower and mid-level roles reported carrying a higher burden of frontline clinical management of Covid-positive patients than their White counterparts. Furthermore, the study reported evidence of systemic racial bias in the disproportionate redeployment of minority ethnic nursing staff to Covid-19 wards (Kapilashrami et al., 2022). Such findings from the wider Covid-19 literature may account for the greater sense of betrayal and helplessness experienced by HCWs of minority backgrounds, and calls for a transparent NHS-wide review to evaluate procedural fairness and ensure safe and equitable practices (Kapilashrami et al., 2022).

A further novel outcome of this study was the impact of PMIE exposure on participants' family life and interpersonal relationships over the long term. Whilst amid the pandemic, PMIE exposure appeared to create relational distancing between some HCWs' and their non-HCW friends and families. This was linked to feeling best understood by those experiencing the same challenges under pressured pandemic conditions. However, the long-term implication of this was two-fold: some HCWs need for social connection appeared to permanently change to include greater need for solitude and less need for social engagement, whilst others experienced social anxiety and isolation. This included greater isolation within families, which increased caring responsibilities of parents who relied on the support of extended family members pre-pandemic. This atomising of family units pushes families towards greater individualism in an already individualistic society, and has been shown to have poor mental health outcomes for parents in the early literature on pandemic effects (Gadermann et al., 2021). Wider literature on pandemic effects not specific to HCWs also observes this reallocation of intra-familial tasks, noting a disproportionate impact to families from minority ethnic backgrounds, those from low-income families, and women (Andrade et al., 2022). Moreover, a greater gender disparity was observed regarding the proportion of domestic work and childcare. These findings may partially explain why women in this study's sample shared a greater degree of helplessness and hopelessness.

Within this study, participants' betrayal-based MI acted as somewhat of a catalyst for psychological growth long-term. This psychological growth was not typically in the form of increased resilience, but rather an increased awareness of one's own needs, priorities, and professional value, which stemmed from individuals' MI.

5.9 Strengths and Limitations

The strengths and limitations of the methodology will now be considered and reflected upon.

5.9.1 Study Strengths

This study addresses important gaps in the knowledge base surrounding the longer-term impact of HCWs self-reported exposure to PMIEs in the NHS. In keeping with an emancipatory approach (Oliver, 1997), the amended recruitment strategy was to recruit as inclusively as possible, including diversity in age, racial background, profession, level of seniority, and post-pandemic role. Although not the primary focus of this research, Covid-19 risk disparities across people from racial minority backgrounds (Public Health England, 2020) may have led to a difference in experience for this subset of HCWs as compared to their White British counterparts working in high-risk environments. Therefore, the inclusivity of recruitment permitted for a variety of experiences to be captured, which strengthens the transferability of findings to other HCWs who experienced PMIE exposure. To the author's knowledge, only one other study on this topic has achieved a range of demographic and occupational diversity in their sample (i.e. Hegarty et al., 2022).

The sample size further enabled a spectrum of experiences to be considered and was in line with Braun & Clarke's (2013) recommendations for sample size. Participants were both known and unknown to the interviewer which likely permitted a rich range of data. On one hand, the familiarity of the interviewer may have made participants comfortable to reveal experiences that may have been difficult to share with a stranger. On the other hand, participants known to the interviewer could have been more wary of the information they shared which may have constrained the depth of the information shared. However, this should have been compensated by the fact that many of the participants were completely unknown to the researcher.

The methodological approach used enabled an in-depth exploration of participants stories of their pandemic experiences. The reflexive thematic analysis (TA) approach meant that the interview process was flexible, allowing the researcher to reorganise the interview questions and ask further probing questions that allowed for exploration of narratives at a deeper level. Furthermore, study recruitment materials and the researcher's questioning style were kept neutral so that interviews could be led by the participant. This led to exploration of positive and negative experiences and narratives not initially considered by the researcher – such as participants' psychological coping method of downwards comparison. The use of a pilot interview further aided in shaping the language and questioning style of the interview.

The completion of doctoral level research necessitates thorough ethical procedures and institutional processes that uphold scientific rigour throughout the literature review, methodology, and analysis. Adherence to Braun and Clarke's (2006, 2019) recommendations for conducting reflexive TA was maintained to ensure a robust methodology. This included the interviewer's provision of a reflective diary and conversations with supervisors which enabled them to acknowledge and address any biases so that they could remain as neutral as possible when conducting the research.

The research provides insight into the impact of working during the Covid-19 pandemic on HCWs experiences of MI and social, psychological, and emotional functioning; and reveals potential long-term impacts. The findings shed light on the importance of targeted institutional support both during and after the pandemic for staff wellbeing.

5.9.2 Limitations of the Study

As with all research, this study has its limitations. Inherent in its qualitative design, inferences about causality between PMIE exposure and experience of MI and psychological distress go beyond the scope of the study. Furthermore, despite the interviewer’s specific inquest around acts of betrayal and commission, acts of commission did not feature as heavily in participants’ narratives. This was similar to Hegarty and colleagues' (2022) finding, and echoes the possibility that participants may have particularly struggled to reflect on their own transgressive actions relative to others’ transgressive acts.

A key limitation of the study was the sampling strategy used. Although several organisations were approached to assist in recruitment and multiple social media platforms were mobilised, these did not generate any participants. Purposive sampling of participants was used, followed by snowball sampling of contacts known to participants. This carried a sampling bias as a disproportionately skewed number of participants were clinicians who had left clinical practice to work in academia. Furthermore, of those participants who had remained in clinical work, most had moved to different clinical roles due to resignation, end of redeployment, or end of placement in the case of trainee participants. Therefore, the evolution of participants’ careers left more to be desired from the voices of those HCWs who had remained in the same clinical roles post-pandemic. Still, it was striking that so many of the participant sample had changed roles during the pandemic and further worked across multiple roles in part time capacities. This was likely representative of the lack of funding for clinical posts, as well as staff experiences of workplace stressors which might discourage them from holding full-time positions in any one role. That said, the sample was heterogenous in several ways, which helped build a nuanced picture of HCWs experiences. Additionally, despite achieving diverse sample characteristics, thorough intersectional framing was beyond the scope of this study, making it difficult to unpick the interplay of specific intersectional characteristics on experience of MI.

A longitudinal research design could have been an alternative to addressing the knowledge gap considering the longer-term impact of HCW exposure to PMIE during the pandemic, however time constraints of the doctoral thesis did not permit this. Instead, the study aimed at gathering the perceptions of those who could offer a longitudinal perspective of their experiences two and a half years on from the start of the pandemic. Consequently, the research gained from retrospective accounts of participating HCWs.

A further limitation of the sample was the gender imbalance and predominant focus on the female experience of working during the pandemic. Therefore, it may be that male perspectives captured in this study are less transferable to experiences of male HCWs more broadly, though this cannot be known definitively. Within the findings of this study, it appeared that male participants were overall less detrimentally impacted by their experience of PMIEs, although these are tentatively drawn conclusions based on very few male participants. Interestingly, two of the three male participants were single men without additional caring responsibilities. The remaining participant was a father of two, however, he shared that his wife was the main carer of the children during the pandemic, and juggled home-schooling and working from home. Such differences in participants' caring responsibilities may potentially contribute to gender differences in the overall impact of pandemic pressures. As existing literature captures differences in male and female experiences of mental health difficulties following PMIE exposure (Lamb et al., 2021; Williamson et al., 2022), it would be interesting to explore the potential similarities and differences in the narratives and meaning making of experiences in males and females.

Having evaluated the strengths and limitations of the study, clinical implications of the findings will now be considered before presenting recommendations for further research.

5.10 Clinical Implications

5.10.1 Preventing Moral Injury in the NHS

In taking the preventive approach, the voices of participants in the sub-theme 'channelling energy to what can be helped' is echoed, emphasising the importance of teaching future generations of HCWs the realities of working in healthcare. It is important that NHS Trusts proactively train and prepare staff at risk of MI to psychologically manage unavoidable PMIEs they are likely to encounter as part of their usual clinical roles. It may be helpful for this training to be offered periodically and in person, particularly during and after times of crisis such as a pandemic. Training should be honest and open and highlight the ways PMIEs might impact staff and how they should cope with them. NHS Trusts should be alert to early signs of distress and avoid medicalisation of responses to PMIE exposure (Shale, 2020). Whilst highlighting the realities of working in healthcare, it should be emphasised that any psychological difficulties experienced following PMIE exposure is likely to be short term if adequately resolved by the healthcare system. Equally, NHS Trusts should directly seek HCWs' input about their practical needs in managing their work with minimal PMIE exposure. Healthcare organisations need to listen, consider, and implement practical problem-solving suggestions which staff may need as a responsive approach to their MI, before considering more in-depth therapeutic support (McPherson, 2020) such as provision of psychologists, reflective spaces, and chaplains.

Participants shed light on the difficult and at times conflicting internal states that HCWs experienced. It is recommended that Trusts consider the way clinical decision making is distributed, ensuring that no individual staff members carry the burden of responsibility for patients' clinical outcomes. Trust seniors should acknowledge the conflict between the ideal patient-centred care and the goal-orientated model of care required during times of crisis in response to large increases in patient volume.

Participants presented a mixed picture of the level of staff support that was available to them. Whilst some felt that there was support available if they needed it, others expressed that there were barriers to accessing support, such that it was at times only nominally available and felt somewhat tokenistic in nature. To address this issue of 'well intended, poorly executed staff support', it is recommended that NHS organisations open clear dialogue with staff at all levels of seniority and listen to staffs' support needs, acknowledging that this will take time and proactive steps on the part of the organisation to regain the trust of its members. It is highlighted that opening channels of communication between executive level NHS staff and clinical staff will likely be ineffective if the system fails to be responsive in addressing staff concerns. To break down the perception that 'they didn't listen or care', the institution needs to be transparent in its communication with staff and set realistic expectations and targets which can be achieved in the current context of staffing and resource shortages. This approach may aid in reducing

HCWs emotional states of helplessness and guilt as they begin to be permitted to exercise their views and power.

5.10.2 Addressing Moral Injury with Accountability and Moral Repair

This study sheds light on an important aspect of MI that may be inherent in self-reported experiences of burnout during the pandemic and highlights the significance of ‘the betrayal of the NHS’ across the spectrum of clinical roles and levels of seniority in the healthcare sector. Much of the literature on MI in healthcare during Covid-19 converges on perpetration-based MI which results in individual support strategies and interventions for managing guilt and shame (e.g., Haller et al., 2020). However, most participants in this study expressed frustration and anger, rather than guilt or shame, at perceived betrayals perpetrated by their leadership, which ranged from NHS middle management level all the way to the government. Interestingly, these perspectives were not linked to participant’s level of seniority or role.

These findings, coupled with participants job changes since the pandemic, indicated a lack of moral repair and accountability from their leadership. Therefore, whilst individually targeted psychological support will likely be helpful for HCWs following the pandemic, other forms of intervention that place emphasis on moral repair are needed to re-establish moral equilibrium (Shale, 2020). It is acknowledged that not all staff will require both forms of intervention. Moreover, it is cheaper to provide psychologists, chaplains, and support groups, than to offer secure work in a low stress environment, and so, through these individually focused self-help practices, in the absence of systems level change, organisations arguably exploit workers. Hence, disregarding systemic moral betrayals of the institution will likely limit the effectiveness of psychological support which focuses solely on trauma responses without addressing feelings of betrayal and loss of trust in leadership. Clearly, this shortfall has an impact on the perception of staff towards their leadership and the NHS organisation.

Given the current high rates of staff turnover in the NHS (NHS Digital, 2022), unrepaired MI will likely have a significant impact on existing staff shortages. As such, healthcare providers should look to create cultures of safety to regain staff trust and aid moral repair (Barnsteiner, 2011). On a practical level, morally reparative action on the part of the NHS calls for large-scale recruitment of additional staff and appropriate matching of staff to job roles, as set out in the recent long term workforce plan (NHS England, 2023b), the effects of which remain to be seen. Equally, as participants expressed an ongoing 'betrayal by government' exacerbated by specific pandemic related decisions, similar practices are encouraged at government level. This includes adequate maintenance of national PPE reserves and government investment in the NHS workforce through funding that levels with population demand. If moral repair is vital to the healthcare sector, it is equally pertinent for those functioning at a wider socio-political level to set an example in taking accountability and atoning for their errors.

5.11 Further Research

As fewer participants discussed commission related PMIEs, future research can gain from exploration of this specific type of PMIEs to increase knowledge of this facet of MI. An online qualitative survey design which can permit anonymous responses might be better suited to this area of exploration, to bypass individual's defences in acknowledging acts of commission. It is important that recruitment materials for such a study use language which normalises these experiences in the context of a pandemic, to reassure participants of the multitude of difficult emotions someone might encounter in these circumstances.

To investigate whether participants’ experiences are transferable to the experiences of NHS staff on a broader scale, future research could use quantitative methodology to further explore betrayal-based MI with a larger sample. This could be stratified across different levels of seniority to determine any differences in incidence of betrayal-based MI across different levels of the institutional hierarchy and responsibility.

Future research should endeavour to explore the experiences of HCWs who remained in their pandemic roles, as the continuation of this work and ongoing exposure to settings in which PMIEs occurred will likely impact HCWs emotional and psychological wellbeing differently. This was something that could not be fully explored in this study due to role changes experienced by most of the sample. This could be achieved by recruiting clinicians directly from NHS Trusts to increase the likelihood of recruiting HCWs who remained in their pandemic roles. Unfortunately, this recruitment strategy was beyond the scope of this doctoral research due to backlogs of NHS ethical applications resulting from the pandemic.

To learn about differences in the experiences of people from marginalised backgrounds during the pandemic, future research can benefit from exploring the nuances of how issues linked to race, culture, and increased risk of contracting Covid-19 have interplayed with issues of morality in the healthcare context.

Additionally, an alternative methodology such as grounded theory could have been employed to generate a new theory around exposure to PMIEs and experience of MI, psychological difficulties, resilience, and growth. However, whilst this would shed new light on this relatively novel area of research, time constraints of this doctoral research did not allow for this.

5.12 Reflective Account

Throughout the research project I have become increasingly aware of my own biases relating to the NHS healthcare system. I became aware that I was comparing participants' pandemic experiences to my own experience of working in the NHS, both during and outside of crisis times. I felt that the nature of my clinical role in the NHS permitted me 'insider knowledge' on long-standing systemic issues in the NHS, which fostered an unspoken alignment and sense of kinship with my participants.

During the thesis project, I experienced some of the systemic issues within the NHS first-hand, as a patient receiving medical investigations in an NHS hospital Trust. The long wait times for appointments, the constant changeover of attending clinicians, and the miscommunication or plain lack of communication between hospital departments made me feel like fragmented pieces of a whole – with each 'piece' of the whole belonging to a different hospital department to manage.

I grappled with these experiences as they sat at odds with the compassion of the participants, as well the compassion of my NHS colleagues. I knew what I was experiencing was a result of longstanding austerity measures and inconsistencies in care that would likely be present to varying degrees in any large organisation. This duality in perspectives permitted me greater empathy and compassion for what my participants were trying to convey on behalf of themselves, their colleagues, and their patients.

I was grateful that I was well enough to be the gatekeeper of my own health, managing appointments and following through on doctors' advice. I felt saddened that this would not have been the case for many of the patients my participants cared for, who would have been in their worst days, and I considered the impact of this both on the patients and their families amid a global crisis, and on the mental health of the attending HCWs.

As a result of these biases, it was important that I permitted space for participants to express both positive and negative experiences during interviews and considered all forms of experience in the analysis. For these reasons, I was mindful to be neutral and non-leading in my use of language throughout the interviews and to remain open and curious to participants' reflections.

This research experience permitted me to pay closer attention to the relative costs and benefits of our free healthcare system versus that of other countries I had encountered. Whilst 'free healthcare for all' is not an ideal many would contest, this sat at odds with the individualistic lens of capitalism and neoliberalism which led to backdoor privatisation of the NHS, where the healthcare system is not working as intended and is failing the population at different levels (Toop, 2004).

Throughout the interview phase of the research, I found myself resonating with participants' narratives around workload and productivity, and feelings of overwhelm and burnout. I wondered about my personal drivers to "perform" and be efficacious in the context of a capitalist society, within a profession known for being competitive and attracting people with perfectionist traits (D'Souza et al., 2011). Moreover, as the only person in the paternal side of my family to have reached doctoral level training, with an upbringing that emphasised academic attainment and success, my curiosity peaked with the question I asked my participant "do you feel that we need to show what we can cope with…and are resilient in the profession that you do…in order to move up?".

As a Trainee Clinical Psychologist, the knowledge I gained was invaluable in teaching me about the importance of protecting one's own mental health when navigating a career within the healthcare system. I hope this project can contribute to enabling HCWs to feel connected, content, safe, and valued in their work environments. I am forever grateful to my participants for enriching my knowledge through their contribution to research and hope I can do their voices justice by amplifying their voices through dissemination of this research.

5.13 Conclusion

The main aim of the study was to explore HCWs experiences of PMIE exposure in relation to the development of MI. This involved consideration of the impact of organisational support on HCWs MI, as well as the impact of HCWs experiences on their family and social life, and emotional and psychological wellbeing. Qualitative interviews were conducted with 15 HCWs from a variety of clinical roles. The use of reflexive TA permitted deeper insight into the data to consider recurring themes by focusing on participants' narratives and meaning making of their experiences. This research provided a novel contribution to growing literature on the effects of pandemic working on HCWs psychological wellbeing by considering the potential longer-term impacts of PMIE exposures. In summary, participants shared more experiences of institutional betrayal than incidences of commission-based MI which impacted their trust and faith in the NHS system and ultimately led to decisions to leave their roles. However, participants shared ways they coped with the challenges of their roles and their MI, such as through acts of resistance and supporting their immediate colleagues. Participants' pandemic experiences influenced their prioritisation of specific ways of working, and for some led to social withdrawal and isolation, and longer-term psychological struggles.

The clinical implications of the study highlight a need for the NHS leadership to acknowledge institutional failings and engage in moral repair with its employees to rebuild HCWs loss of trust and fractured relationships with the organisation. Leadership at all levels of the healthcare system should be trained to understand and recognise MI and engage in moral repair through active listening, empathy, and atonement where required to encourage mutual trust and aid in reducing HCWs intention to leave post. Atonement for staff MI should include sufficient recruitment of staff, adequate provision of equipment and PPE, ensuring staff have an appropriate workload, and enough time for rest and recovery. These practical endeavours should be provided in addition to trauma-informed psychological support made available to staff at all levels of seniority, in a manner accessible to them. Finally, the study implicates similar reparative behaviours to be modelled at government level, including adequate funding of the NHS in keeping with population demand, to reduce betrayal-based MI and feelings of disillusionment among healthcare staff.

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7 Appendices

7.1 Appendix A – CASP Critical Appraisal for Qualitative Research

	Clear statement of aims?	Qualitative methodology appropriate?	Research design appropriate?	Recruitment strategy appropriate?	Data collection appropriate?	Researcher-participant relationship considered?	Ethical issues considered?	Data analysis rigorous?	Clear statement of finding?	Value of research?
Denham et al (2023)	Y	Y	Y	Y	Y	Can't Tell	Y	Y	Y	Research implications are clearly stated
French et al (2022)	Y	Y	Y	Y	Y	N	Y	Y	Y	Research implications are clearly stated
Hegarty et al (2022)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Research implications are clearly stated
Liberati et al (2021)	Y	Y	Y	Y	Y	N	Y	Y	Y	Research implications are clearly stated

7.2 Appendix B – CASP Critical Appraisal for Quantitative Cohort Studies

	Clear issue addressed?	Recruitment strategy appropriate?	Exposure accurately measured?	Outcome accurately measured?	Cofounding factors mitigated?	Follow-up period appropriate?	Precision of results?	Results believable?	Results applicable?	Fit with available literature?	Implications considered?
Lamb et al (2021)	Y	Y	Y	Y	Y	can’t tell	Confidence intervals provided	Y	Y	Y	Y

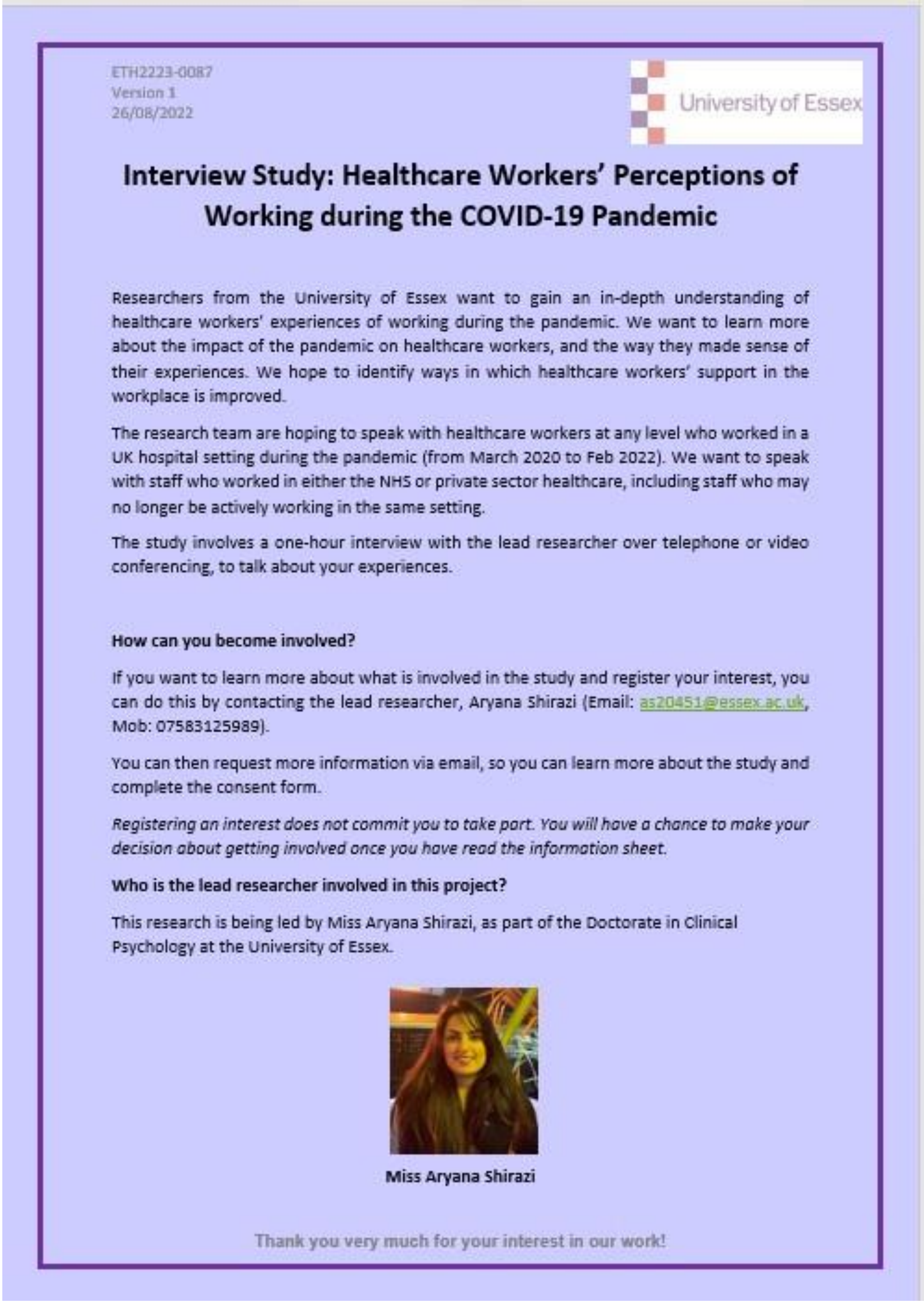
7.3 Appendix C – CEBM Critical Appraisal for Quantitative Survey Studies

	Clear statement of aims?	Study design appropriate?	Selection method clear?	Any selection bias?	Representative sample?	Sample size consideration of power?	Satisfactory response rate?	Valid and reliable measures?	Statistical significance assessed?	Confidence intervals provided?	Any unaccounted confounds?	Results applicable?
Williamson et al (2022)	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y

7.4 Appendix D - Criteria for Good Thematic Analysis (by Braun & Clarke, 2013)

No.	**Process**	**Criteria**	***Application***
1	Transcription	The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for ‘accuracy’.	Each transcript was transcribed orthographically and checked against the original recording.
2	Coding	Each data item has been given equal attention in the coding process.	Line by line coding was facilitated to develop codes.
3		Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive.	Themes were developed from complete coding of the entire dataset. The coding process was thorough, inclusive and comprehensive, as all quotations were used to generate codes, and develop themes. Each theme was developed based on numerous codes gathered across a range of participants’ quotations.
4		All relevant extracts for each theme have been collated.	Yes.
5		Themes have been checked against each other and back to the original data set.	Yes.
6		Themes are internally coherent, consistent, and distinctive.	Yes.
7	Analysis	Data have been analysed – interpreted, made sense of – rather than just paraphrased or described.	Yes, as evidenced in the results chapter.
8		Analysis and data match each other – the extracts illustrate the analytic claims.	The analysis and findings from it closely match the data set.
9		Analysis tells a convincing and well-organised story about the data and topic.	Yes, the findings are presented as an overarching narrative gleaned from participants.
10		A good balance between analytic narrative and illustrative extracts is provided.	Yes, as evidenced in results chapter.
11	Overall	Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over lightly.	Overall, three years were spent developing, facilitating, and writing up the research; three months were specifically focused on analysis, excluding write-up of findings.
12	Written Report	The assumptions about, and specific approach to, thematic analysis are clearly explicated.	Yes, as evidenced in methods chapter.
13		There is a good fit between what you claim you do, and what you show you have done – i.e. described method and reported analysis are consistent.	Yes, as evidenced in methods and results chapters.
14		The language and concepts used in the report are consistent with the epistemological position of the analysis.	Yes, TA involves transparency of ontological and epistemological positions and taking ownership of interpretations.
15		The researcher is positioned as ‘active’ in the research process; themes do not just ‘emerge’.	Yes, ownership of relationship with the research process demonstrated through use of first-person dialectic where appropriate in the study write-up.

7.5 Appendix E – Study Advert



ETH2223-0087
Version 1
26/08/2022

Interview Study: Healthcare Workers' Perceptions of Working during the COVID-19 Pandemic

Researchers from the University of Essex want to gain an in-depth understanding of healthcare workers' experiences of working during the pandemic. We want to learn more about the impact of the pandemic on healthcare workers, and the way they made sense of their experiences. We hope to identify ways in which healthcare workers' support in the workplace is improved.

The research team are hoping to speak with healthcare workers at any level who worked in a UK hospital setting during the pandemic (from March 2020 to Feb 2022). We want to speak with staff who worked in either the NHS or private sector healthcare, including staff who may no longer be actively working in the same setting.

The study involves a one-hour interview with the lead researcher over telephone or video conferencing, to talk about your experiences.

How can you become involved?

If you want to learn more about what is involved in the study and register your interest, you can do this by contacting the lead researcher, Aryana Shirazi (Email: as20451@essex.ac.uk, Mob: 07583125989).

You can then request more information via email, so you can learn more about the study and complete the consent form.

Registering an interest does not commit you to take part. You will have a chance to make your decision about getting involved once you have read the information sheet.

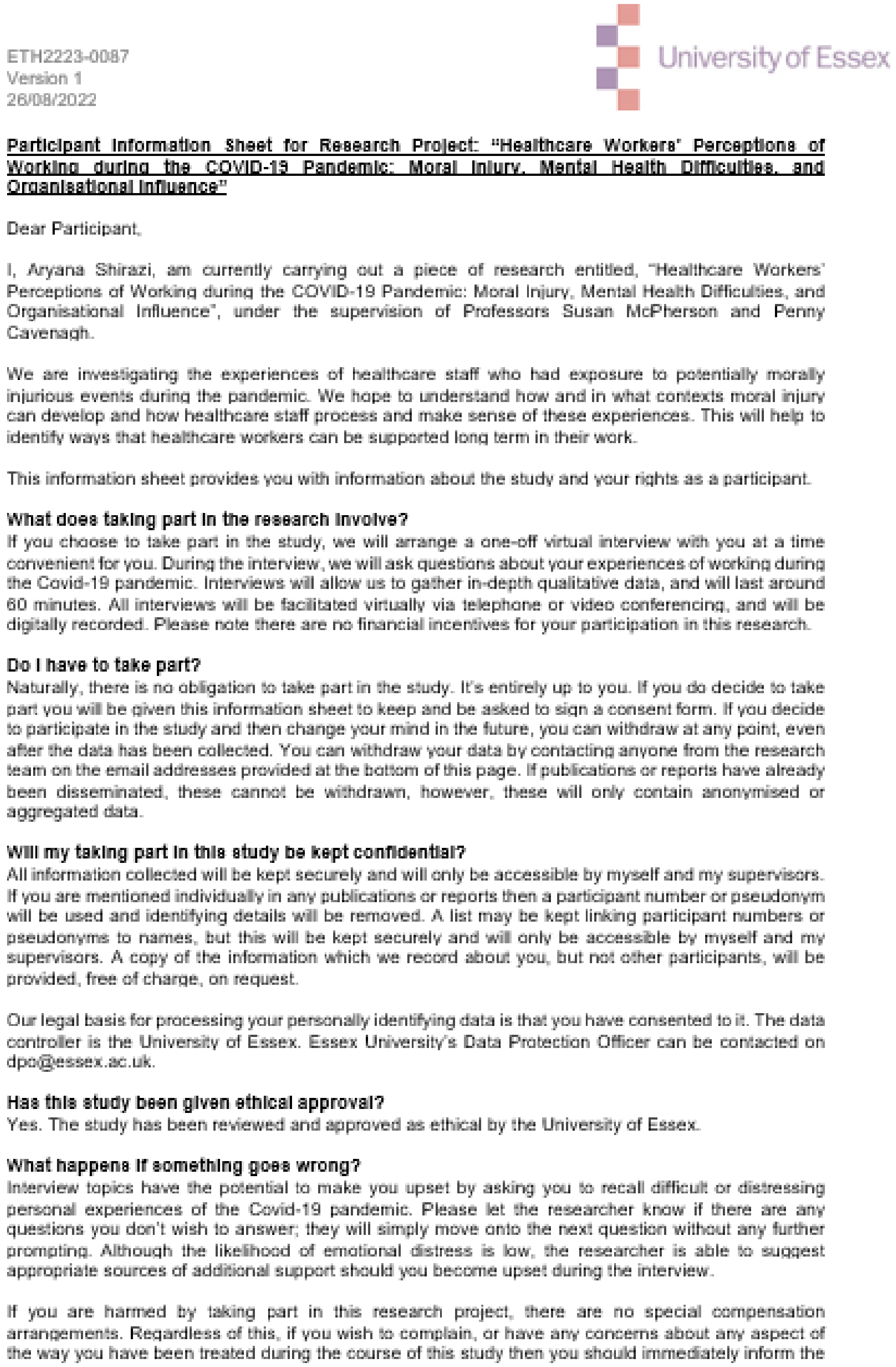
Who is the lead researcher involved in this project?

This research is being led by Miss Aryana Shirazi, as part of the Doctorate in Clinical Psychology at the University of Essex.

Miss Aryana Shirazi

Thank you very much for your interest in our work!

7.6 Appendix F – Participant Information Sheet



ETH2223-0087
Version 1
26/08/2022

University of Essex

Participant Information Sheet for Research Project: "Healthcare Workers' Perceptions of Working during the COVID-19 Pandemic: Moral Injury, Mental Health Difficulties, and Organisational Influence"

Dear Participant,

I, Aryana Shirazi, am currently carrying out a piece of research entitled, "Healthcare Workers' Perceptions of Working during the COVID-19 Pandemic: Moral Injury, Mental Health Difficulties, and Organisational Influence", under the supervision of Professors Susan McPherson and Penny Cavenagh.

We are investigating the experiences of healthcare staff who had exposure to potentially morally injurious events during the pandemic. We hope to understand how and in what contexts moral injury can develop and how healthcare staff process and make sense of these experiences. This will help to identify ways that healthcare workers can be supported long term in their work.

This information sheet provides you with information about the study and your rights as a participant.

What does taking part in the research involve?
If you choose to take part in the study, we will arrange a one-off virtual interview with you at a time convenient for you. During the interview, we will ask questions about your experiences of working during the Covid-19 pandemic. Interviews will allow us to gather in-depth qualitative data, and will last around 60 minutes. All interviews will be facilitated virtually via telephone or video conferencing, and will be digitally recorded. Please note there are no financial incentives for your participation in this research.

Do I have to take part?
Naturally, there is no obligation to take part in the study. It's entirely up to you. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to participate in the study and then change your mind in the future, you can withdraw at any point, even after the data has been collected. You can withdraw your data by contacting anyone from the research team on the email addresses provided at the bottom of this page. If publications or reports have already been disseminated, these cannot be withdrawn, however, these will only contain anonymised or aggregated data.

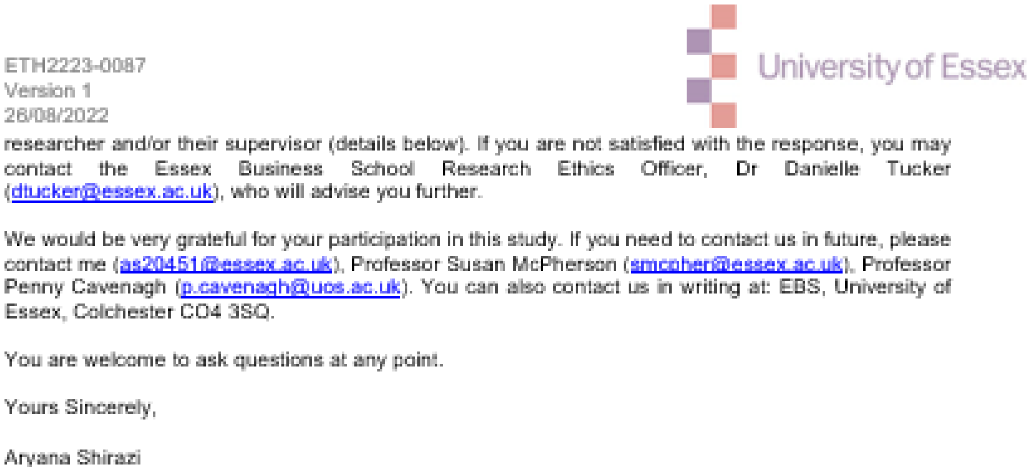
Will my taking part in this study be kept confidential?
All information collected will be kept securely and will only be accessible by myself and my supervisors. If you are mentioned individually in any publications or reports then a participant number or pseudonym will be used and identifying details will be removed. A list may be kept linking participant numbers or pseudonyms to names, but this will be kept securely and will only be accessible by myself and my supervisors. A copy of the information which we record about you, but not other participants, will be provided, free of charge, on request.

Our legal basis for processing your personally identifying data is that you have consented to it. The data controller is the University of Essex. Essex University's Data Protection Officer can be contacted on dpo@essex.ac.uk.

Has this study been given ethical approval?
Yes. The study has been reviewed and approved as ethical by the University of Essex.

What happens if something goes wrong?
Interview topics have the potential to make you upset by asking you to recall difficult or distressing personal experiences of the Covid-19 pandemic. Please let the researcher know if there are any questions you don't wish to answer; they will simply move onto the next question without any further prompting. Although the likelihood of emotional distress is low, the researcher is able to suggest appropriate sources of additional support should you become upset during the interview.

If you are harmed by taking part in this research project, there are no special compensation arrangements. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been treated during the course of this study then you should immediately inform the



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researcher and/or their supervisor (details below). If you are not satisfied with the response, you may contact the Essex Business School Research Ethics Officer, Dr Danielle Tucker (dtucker@essex.ac.uk), who will advise you further.

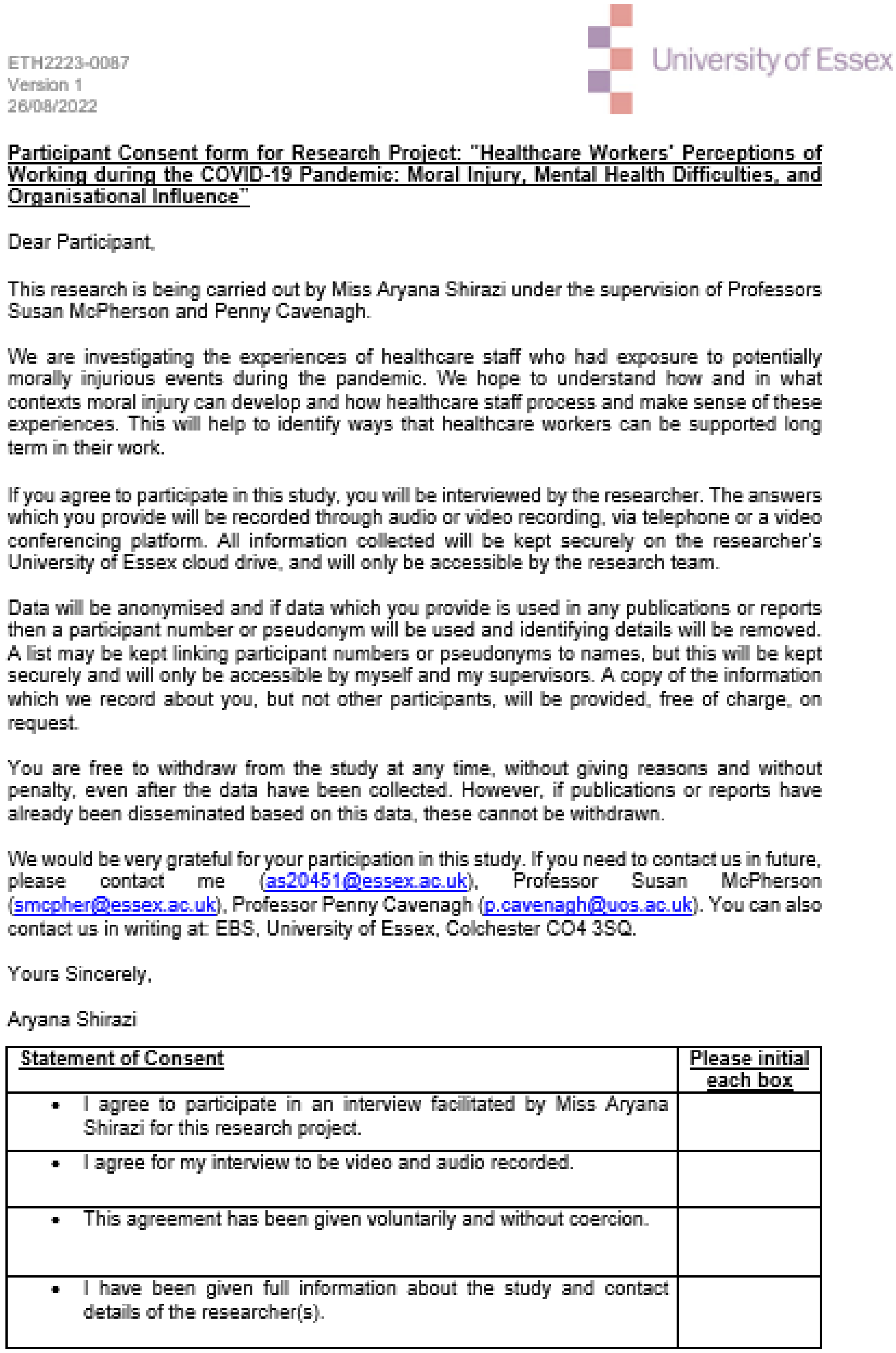
We would be very grateful for your participation in this study. If you need to contact us in future, please contact me (as20451@essex.ac.uk), Professor Susan McPherson (smcpher@essex.ac.uk), Professor Penny Cavenagh (p.cavenagh@uos.ac.uk). You can also contact us in writing at: EBS, University of Essex, Colchester CO4 3SQ.

You are welcome to ask questions at any point.

Yours Sincerely,

Aryana Shirazi

7.7 Appendix G – Consent Form



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University of Essex

Participant Consent form for Research Project: "Healthcare Workers' Perceptions of Working during the COVID-19 Pandemic: Moral Injury, Mental Health Difficulties, and Organisational Influence"

Dear Participant,

This research is being carried out by Miss Aryana Shirazi under the supervision of Professors Susan McPherson and Penny Cavenagh.

We are investigating the experiences of healthcare staff who had exposure to potentially morally injurious events during the pandemic. We hope to understand how and in what contexts moral injury can develop and how healthcare staff process and make sense of these experiences. This will help to identify ways that healthcare workers can be supported long term in their work.

If you agree to participate in this study, you will be interviewed by the researcher. The answers which you provide will be recorded through audio or video recording, via telephone or a video conferencing platform. All information collected will be kept securely on the researcher's University of Essex cloud drive, and will only be accessible by the research team.

Data will be anonymised and if data which you provide is used in any publications or reports then a participant number or pseudonym will be used and identifying details will be removed. A list may be kept linking participant numbers or pseudonyms to names, but this will be kept securely and will only be accessible by myself and my supervisors. A copy of the information which we record about you, but not other participants, will be provided, free of charge, on request.

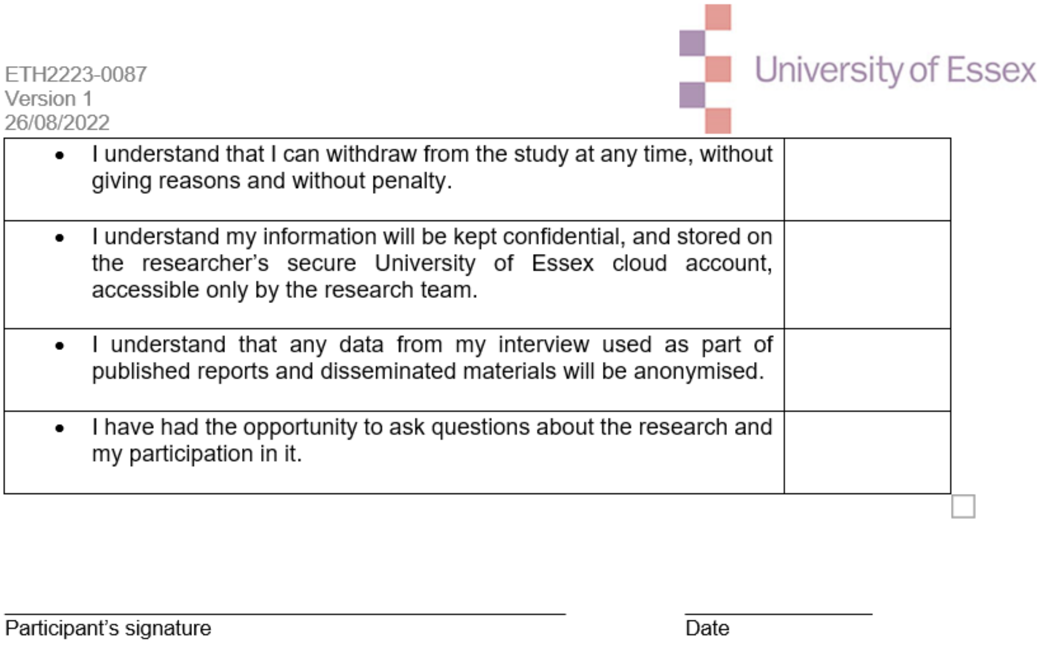
You are free to withdraw from the study at any time, without giving reasons and without penalty, even after the data have been collected. However, if publications or reports have already been disseminated based on this data, these cannot be withdrawn.

We would be very grateful for your participation in this study. If you need to contact us in future, please contact me (as20451@essex.ac.uk), Professor Susan McPherson (smcpher@essex.ac.uk), Professor Penny Cavenagh (p.cavenagh@uos.ac.uk). You can also contact us in writing at: EBS, University of Essex, Colchester CO4 3SQ.

Yours Sincerely,

Aryana Shirazi

Statement of Consent	**Please initial each box**
• I agree to participate in an interview facilitated by Miss Aryana Shirazi for this research project.	
• I agree for my interview to be video and audio recorded.	
• This agreement has been given voluntarily and without coercion.	
• I have been given full information about the study and contact details of the researcher(s).	



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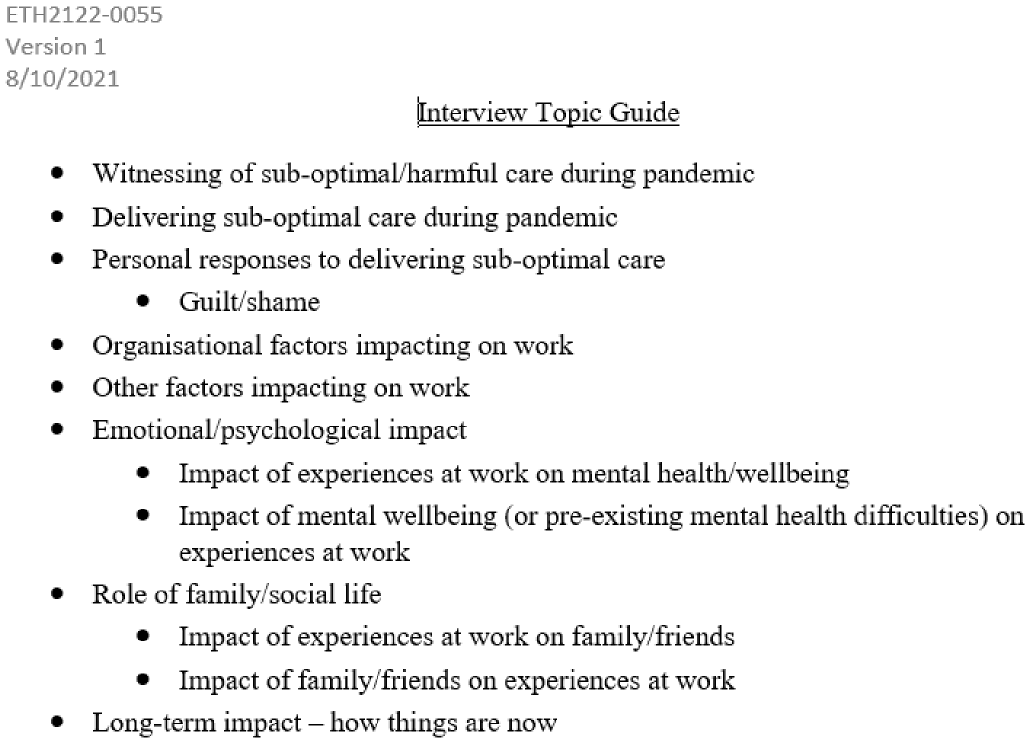
• I understand that I can withdraw from the study at any time, without giving reasons and without penalty.	
• I understand my information will be kept confidential, and stored on the researcher's secure University of Essex cloud account, accessible only by the research team.	
• I understand that any data from my interview used as part of published reports and disseminated materials will be anonymised.	
• I have had the opportunity to ask questions about the research and my participation in it.	

☐

Participant's signature

Date

7.8 Appendix H – Interview Topic Guide

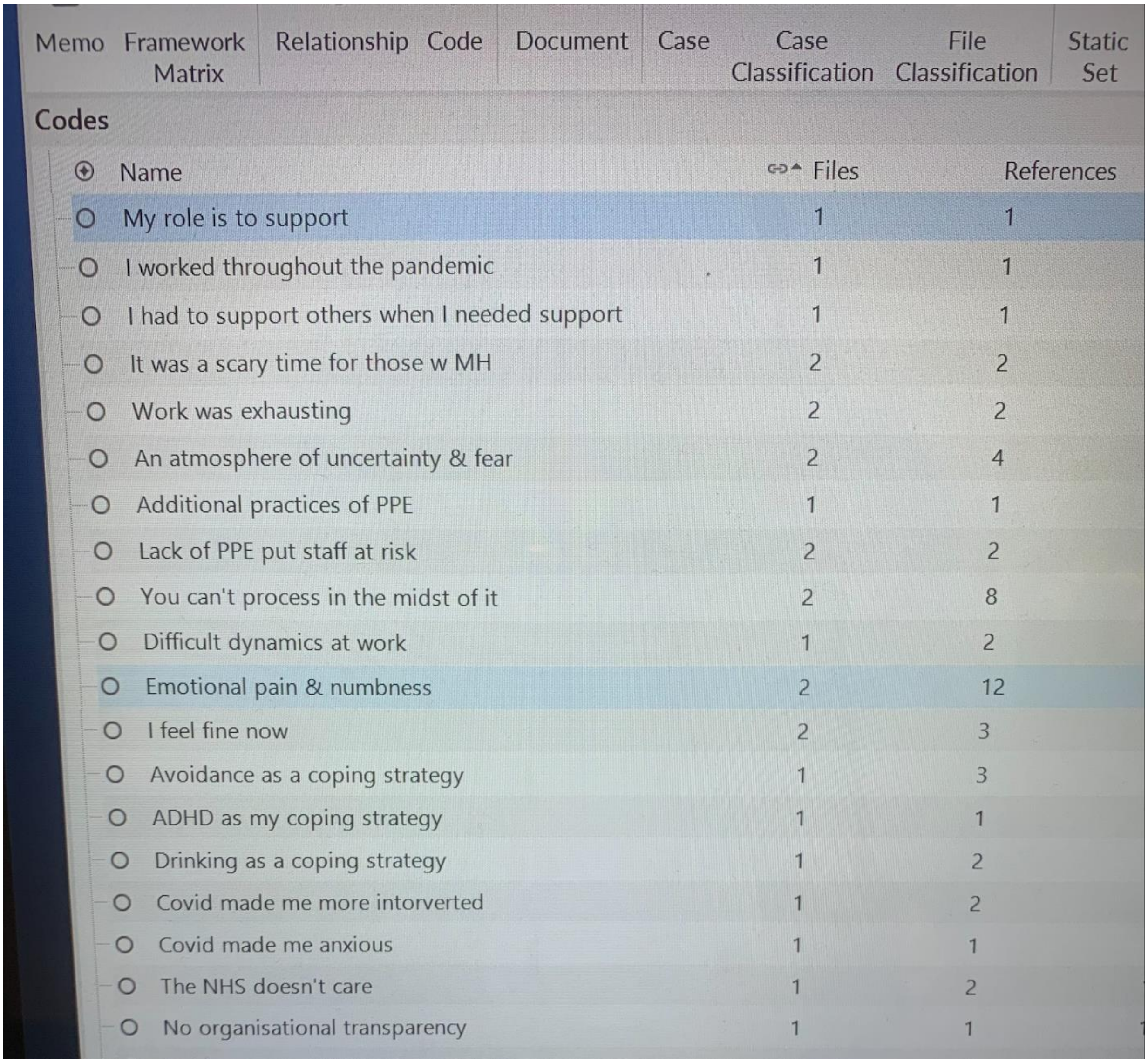


ETH2122-0055
Version 1
8/10/2021

Interview Topic Guide

- Witnessing of sub-optimal/harmful care during pandemic
- Delivering sub-optimal care during pandemic
- Personal responses to delivering sub-optimal care
  - Guilt/shame
- Organisational factors impacting on work
- Other factors impacting on work
- Emotional/psychological impact
  - Impact of experiences at work on mental health/wellbeing
  - Impact of mental wellbeing (or pre-existing mental health difficulties) on experiences at work
- Role of family/social life
  - Impact of experiences at work on family/friends
  - Impact of family/friends on experiences at work
- Long-term impact – how things are now

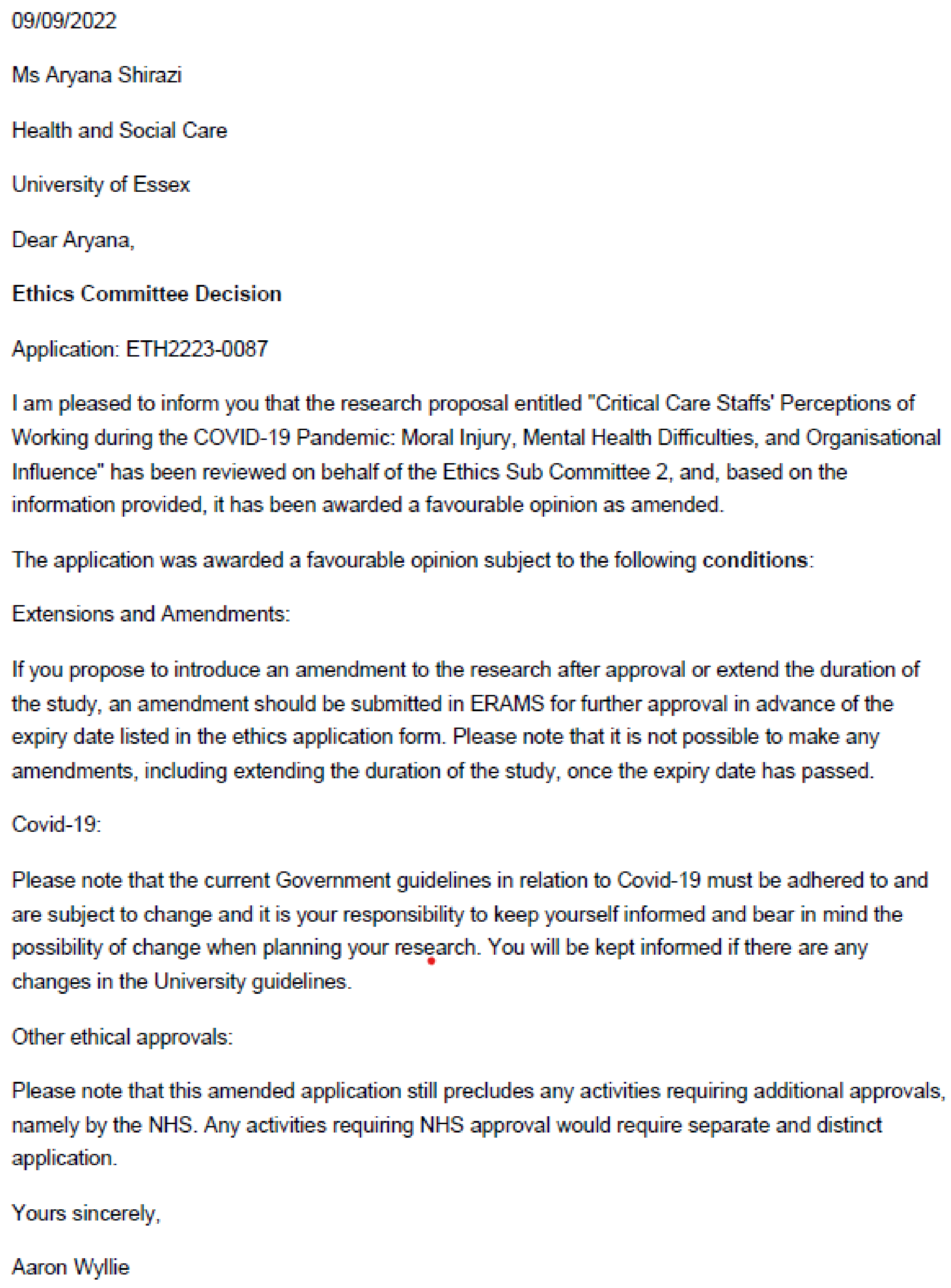
7.9 Appendix I – Example of Coding Using NVivo 12 Software



Codes

Name	Files	References
My role is to support	1	1
I worked throughout the pandemic	1	1
I had to support others when I needed support	1	1
It was a scary time for those w MH	2	2
Work was exhausting	2	2
An atmosphere of uncertainty & fear	2	4
Additional practices of PPE	1	1
Lack of PPE put staff at risk	2	2
You can't process in the midst of it	2	8
Difficult dynamics at work	1	2
Emotional pain & numbness	2	12
I feel fine now	2	3
Avoidance as a coping strategy	1	3
ADHD as my coping strategy	1	1
Drinking as a coping strategy	1	2
Covid made me more intorverted	1	2
Covid made me anxious	1	1
The NHS doesn't care	1	2
No organisational transparency	1	1

7.10 Appendix J – Ethics Committee Decision



09/09/2022

Ms Aryana Shirazi

Health and Social Care

University of Essex

Dear Aryana,

Ethics Committee Decision

Application: ETH2223-0087

I am pleased to inform you that the research proposal entitled "Critical Care Staffs' Perceptions of Working during the COVID-19 Pandemic: Moral Injury, Mental Health Difficulties, and Organisational Influence" has been reviewed on behalf of the Ethics Sub Committee 2, and, based on the information provided, it has been awarded a favourable opinion as amended.

The application was awarded a favourable opinion subject to the following **conditions**:

Extensions and Amendments:

If you propose to introduce an amendment to the research after approval or extend the duration of the study, an amendment should be submitted in ERAMS for further approval in advance of the expiry date listed in the ethics application form. Please note that it is not possible to make any amendments, including extending the duration of the study, once the expiry date has passed.

Covid-19:

Please note that the current Government guidelines in relation to Covid-19 must be adhered to and are subject to change and it is your responsibility to keep yourself informed and bear in mind the possibility of change when planning your research. You will be kept informed if there are any changes in the University guidelines.

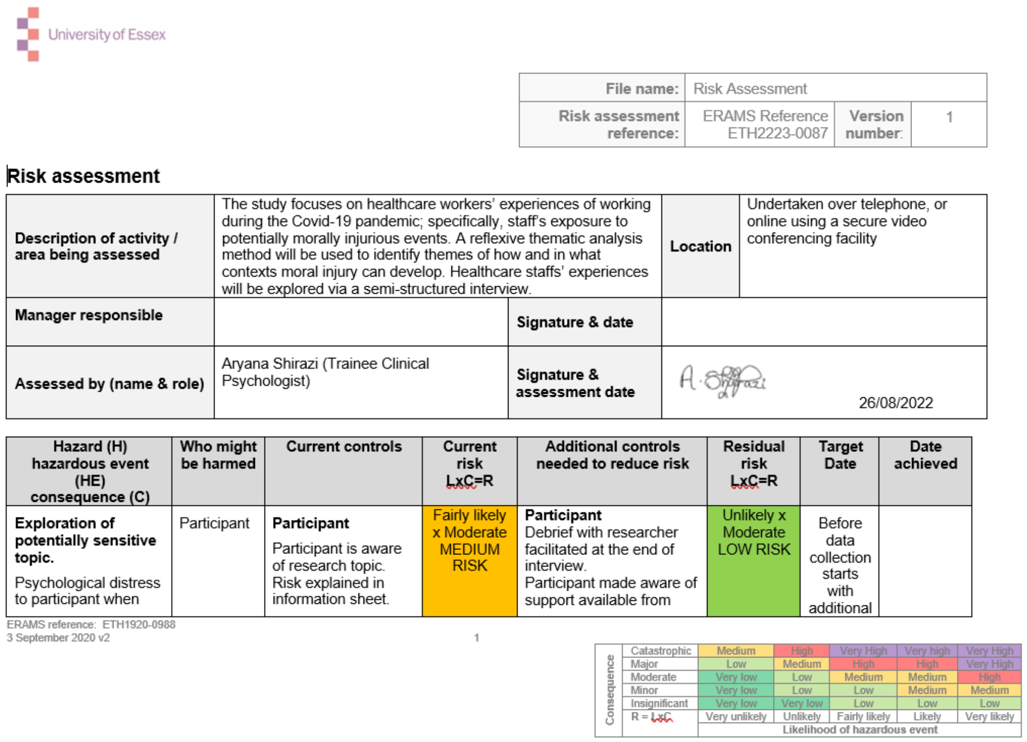
Other ethical approvals:

Please note that this amended application still precludes any activities requiring additional approvals, namely by the NHS. Any activities requiring NHS approval would require separate and distinct application.

Yours sincerely,

Aaron Wyllie

7.11 Appendix K – Risk Management Plan



University of Essex

File name:	Risk Assessment		
Risk assessment reference:	ERAMS Reference ETH2223-0087	**Version number:**	1

Risk assessment

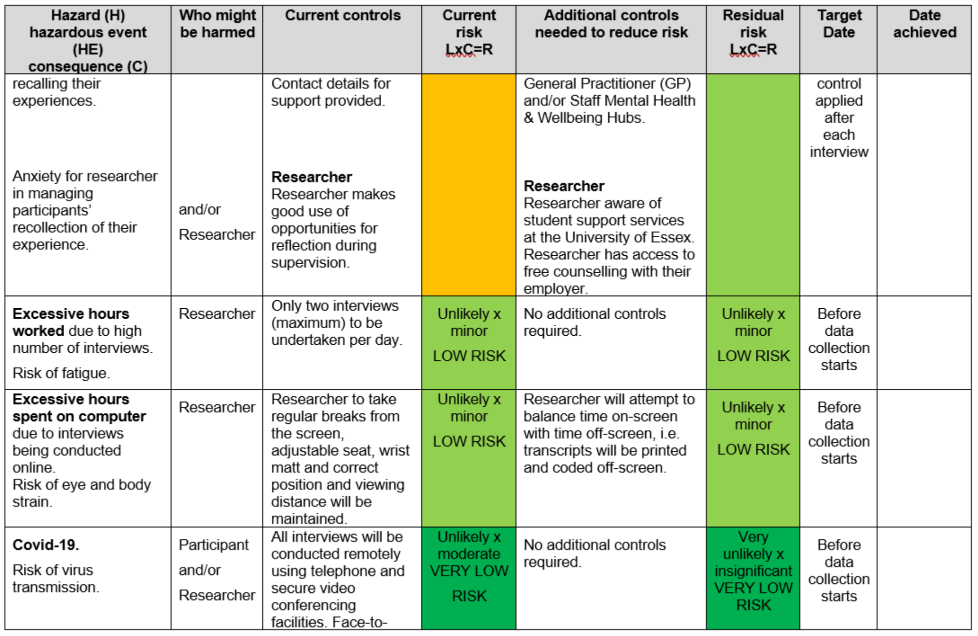
Description of activity / area being assessed	The study focuses on healthcare workers' experiences of working during the Covid-19 pandemic; specifically, staff's exposure to potentially morally injurious events. A reflexive thematic analysis method will be used to identify themes of how and in what contexts moral injury can develop. Healthcare staffs' experiences will be explored via a semi-structured interview.	**Location**	Undertaken over telephone, or online using a secure video conferencing facility
Manager responsible		**Signature & date**	
Assessed by (name & role)	Aryana Shirazi (Trainee Clinical Psychologist)	**Signature & assessment date**	A. Shirazi 26/08/2022

Hazard (H) hazardous event (HE) consequence (C)	Who might be harmed	Current controls	Current risk LxC=R	Additional controls needed to reduce risk	Residual risk LxC=R	Target Date	Date achieved
Exploration of potentially sensitive topic. Psychological distress to participant when	Participant	**Participant** Participant is aware of research topic. Risk explained in information sheet.	Fairly likely x Moderate MEDIUM RISK	**Participant** Debrief with researcher facilitated at the end of interview. Participant made aware of support available from	Unlikely x Moderate LOW RISK	Before data collection starts with additional	

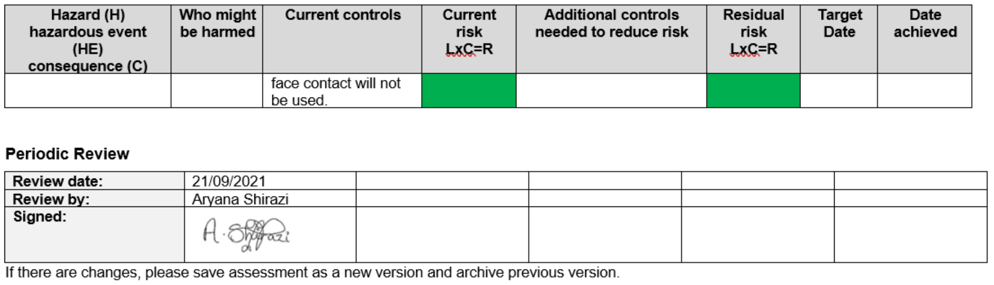
ERAMS reference: ETH1920-0988
3 September 2020 v2

1

Consequence						
	Catastrophic	Medium	High	Very High	Very high	Very High
	Major	Low	Medium	High	High	Very High
	Moderate	Very low	Low	Medium	Medium	High
	Minor	Very low	Low	Low	Medium	Medium
	Insignificant	Very low	Very low	Low	Low	Low
	R = LxC	Very unlikely	Unlikely	Fairly likely	Likely	Very likely
		Likelihood of hazardous event				



Hazard (H) hazardous event (HE) consequence (C)	Who might be harmed	Current controls	Current risk LxC=R	Additional controls needed to reduce risk	Residual risk LxC=R	Target Date	Date achieved
recalling their experiences. Anxiety for researcher in managing participants' recollection of their experience.	and/or Researcher	Contact details for support provided. **Researcher** Researcher makes good use of opportunities for reflection during supervision.	🟧	General Practitioner (GP) and/or Staff Mental Health & Wellbeing Hubs. **Researcher** Researcher aware of student support services at the University of Essex. Researcher has access to free counselling with their employer.	🟩	control applied after each interview	
Excessive hours worked due to high number of interviews. Risk of fatigue.	Researcher	Only two interviews (maximum) to be undertaken per day.	Unlikely x minor LOW RISK	No additional controls required.	Unlikely x minor LOW RISK	Before data collection starts	
Excessive hours spent on computer due to interviews being conducted online. Risk of eye and body strain.	Researcher	Researcher to take regular breaks from the screen, adjustable seat, wrist matt and correct position and viewing distance will be maintained.	Unlikely x minor LOW RISK	Researcher will attempt to balance time on-screen with time off-screen, i.e. transcripts will be printed and coded off-screen.	Unlikely x minor LOW RISK	Before data collection starts	
Covid-19. Risk of virus transmission.	Participant and/or Researcher	All interviews will be conducted remotely using telephone and secure video conferencing facilities. Face-to-	Unlikely x moderate VERY LOW RISK	No additional controls required.	Very unlikely x insignificant VERY LOW RISK	Before data collection starts	



Hazard (H) hazardous event (HE) consequence (C)	Who might be harmed	Current controls	Current risk LxC=R	Additional controls needed to reduce risk	Residual risk LxC=R	Target Date	Date achieved
		face contact will not be used.	🟩		🟩		

Periodic Review

Review date:	21/09/2021				
Review by:	Aryana Shirazi				
Signed:	A. Shirazi				

If there are changes, please save assessment as a new version and archive previous version.