“JUST A COG IN A BIG MACHINE”

A study of prevalence, intervention and psychological experience in the aftermath of burnout and work-related mental illness in Irish hospital doctors

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A study of prevalence, intervention and psychological experience in the aftermath of burnout and work-related mental illness in Irish hospital doctors

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A thesis presented for the award of Doctor of Philosophy

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work, that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Gillian Walsh

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List of abbreviations

HSE Health Service Executive (Ireland)

HR Human Resources

OECD Organisation for Economic Cooperation and Development

IMG International Medical Graduate

BST Basic Specialist Training

HST Higher Specialist Training

SHO Senior House Officer

SpR Specialist Registrar

NCHD Non-Consultant Hospital Doctor

ERI Effort Reward Imbalance

HBM Health Belief Model

NHS National Health Service (UK)

CBT Cognitive Behavioural Therapy

DPA Descriptive Phenomenological Analysis

RCPI Royal College of Physicians of Ireland

RCSI Royal College of Surgeons in Ireland

ESRI Economic and Social Research Institute

Abstract

"JUST A COG IN A BIG MACHINE" - A study of prevalence, intervention and psychological experience in the aftermath of, burnout and work-related mental illness in Irish hospital doctors, Gillian N. Walsh

Burnout and psychological distress continue to be prevalent issues for practising physicians. This programme of research aimed to determine the prevalence of work stress and burnout of Irish hospital doctors, to identify priority interventions to tackle work stress and burnout in this group and to expand our understanding of the psychological experiences of hospital doctors in the aftermath of work-related mental health crises.

This programme of research included a national cross-sectional survey of 1,749 hospital doctors, a qualitative, deductive, thematic analysis of 32 hospital doctors of mixed grade from the survey cohort and an in-depth, descriptive phenomenological analysis of the experiences of 6 senior consultant hospital doctors from the survey cohort.

Study 1 found that almost one third of hospital doctors were experiencing burnout, 59.7% of respondents had low levels of work life-balance, 81.9% had high levels of work stress with the efforts of work not balanced by the rewards of work, furthermore 29.2% reported insufficient work ability. Study 2 found that adequate staffing levels, statutory leave and adequate cover when on leave are the most urgently needed interventions for tackling work stress and burnout among hospital doctors in Ireland. Findings indicate that doctors do not receive the support they need from their clinical line managers. Study 3 provided a rich description of how senior consultants use reflective processes to come to terms with experiences of mental health crisis. In the aftermath of this major, negative life event doctors engaged in two types of reflection, 'situational sense-making' to make sense of their experiences and 'transformative self-reflection' which involves reflection in a deeper way on themselves and their lives on a broader scale. The process of coming to terms with mental health crisis was complicated when support from employers was perceived as poor.

Findings suggest that hospital doctors in Ireland have higher levels of burnout than their international peers. Primary interventions which work on fundamental, system issues such as shortcomings in staffing, cover and leave should be prioritised to tackle work stress and burnout. Doctors who supervise others need to be resourced with training and time to excel as people managers. Doctors themselves can help by rejecting mental health stigmatisation, embracing compassion and self-care and role modelling healthy habits to their peers and junior colleagues.

Reflective processes which contribute to recovery from burnout and mental health crisis should be encouraged and special attention should be paid to the support provided by the employer and supervisors during help seeking, recovery, return to work and beyond, as being poorly supported at this vulnerable time can deepen distress experienced.

Chapter 1: Introduction

Background and Context

The landscape of healthcare needs and the complexity of available healthcare treatments and technology globally is constantly and rapidly changing. Greater proportions of non-communicable diseases, such as cardiovascular disease, diabetes and cancer are consuming more health service resources than in previous eras[1]. Healthcare systems and health policy makers have not been able to keep pace with these changes and, even in developed countries such as Ireland, obvious signs of strain, including excessive waiting lists, avoidable medical errors and major challenges with staff recruitment and retention, are regularly publicised[2-9]. Investing in population-based public health measures and care in community settings, which emphasises early behavioural and pharmacological intervention, has been called for by the World Health Organisation, with the goal of reducing the occurrence and burden of preventable disease[10]. The tendency in modern health systems to focus on the treatment of disease and illness has been questioned in recent decades in favour of a more salutogenic approach which focuses on physical, mental and spiritual factors that contribute to preserving health and wellbeing rather than limiting disease[11]. Despite the popularity of proposed alternatives in theory, achieving the significant transformations in healthcare delivery that are needed to reduce current levels of strain in the system and to control growing costs of modern health system delivery is profoundly challenging in practice. While governments and healthcare organisations struggle with the challenges of health system reform, patient demand for traditional hospital care continues to rise[12] and healthcare professionals must continue to work within the existing care models to meet this demand.

Hospital doctors are central to the delivery of health within the today's hospital model. Places in medical school are highly sought after and achieved only by students with the highest academic performance. Research has found that individuals choose a career path in medicine primarily because of a scientific interest in the field, a desire to help others and a desire to experience a challenging professional career, and many medical students come from a medical family[13]. During medical training, which is considered relatively long in Ireland at 12-17 years[14], there is considered to be an over emphasis on knowledge acquisition and the attainment of clinical skills over the development of competencies such as teamwork, collaboration, leadership and management[15]. While professionalism may be valued, the 'hidden curriculum', considered as unintended learning experiences in medicine such as cultural values, norms and beliefs[16] which starts in medical school and continues into postgraduate training, teaches doctors to value performance and competitiveness above collaboration[15]. Doctors have been shown to be disengaged in work involving organisational or

hospital management activities, such as cost-containment[17] and there is a lack of traditional line management support within the medical profession[18]. Historically, doctors operated as autonomous caregivers, who visited patients in their homes. The hospital institution as we know it today, which cares for an entire population, only evolved in the early 20th century. The hospital doctor now practises within a complex organisational setting without the training needed to thrive in such a setting.

Abundant research has documented that work stress is associated with an increased risk of poor mental and physical health outcomes among employees[19 20]. This relationship has been established for various professions, including physicians[21], who are exposed to particularly high work stress related to work overload, low work-life balance, patient suffering, feeling the system is poorly managed and resourced and fear of error[22-24]. Over half of practising physicians report at least one symptom of burnout and this number is growing[25 26]. Prolonged exposure to burnout and work-related psychological illness can lead to depression and, in some cases, have tragic consequences for physicians[27] and physician stress and burnout is considered to present challenges for family members and place strain on relationships within physician families[28 29]. Further, work stress and burnout may not only predict poor health among physicians, but may also compromise their ability to provide care, thereby contributing to poorer service quality and worse patient health[30 31]. Thus, understanding and addressing work stress, work-related burnout and other work-related mental illness of doctors is important for doctors, their families, and the wider population.

The Irish setting[1]

The challenges faced by healthcare systems with respect to growing patient demand, cost containment, inadequacy of staffing levels and recruitment and retention of health workers, particularly doctors, are global phenomena[32 33]. The situation in Ireland is further compounded by the country's experience through the Great Recession from 2007-2009 and subsequent Irish banking crisis[34]. Drastic cuts in public expenditure were implemented following the multi-billion bailout agreement the Irish Government entered into with the EU and IMF, in order to prevent the collapse of a number of over-leveraged financial institutions[34]. This translated into greater work volume, tighter deadlines and dissatisfaction of service users, with the hospital sector described as 'chaotic', 'overmanaged and underled[6]' and failing to deliver consistently high-quality patient care. The ensuing austerity conditions in Ireland triggered a mass emigration event which included the emigration of hospital doctors to countries which had been less dramatically affected by the recession, in particular

[1] All data for the present study were collected prior to the onset of the global COVID-19 pandemic in March 2020. Since the pandemic, significant extra strain has been placed on resources and a light has been shone on the further importance of well-resourced health systems with respect to readiness to respond to unexpected health emergencies.

Australia[35]. However, doctor emigration from Ireland to Australia has not decreased in line with improved economic conditions in Ireland, as it did for other Irish workers. Evidence suggests that poor working conditions and the desire to preserve mental health and wellbeing may be key factors driving and sustaining doctor emigration[36 37]. 10 years on from the recession in 2017, the Irish health system was still struggling with waiting lists of up to 12 months in some cases for public patients and commentators were calling for urgent reform before 'total systems failure' was reached[38]. In 2022, the situation is not much improved. The Irish Nurses and Midwives Organisation reported record levels of hospital overcrowding[39], there has been a 44% increase in Irish doctors emigrating to Australia[40], and waiting lists for many surgeries remain high[41]. Non-consultant hospital doctors came close to striking this Autumn due to poor working conditions, and hundreds of consultant roles remain unfilled[2].

Despite significant focus and investment on increasing the amount of EU-trained doctors in Ireland, since 2006, Ireland has struggled to fill consultant posts across the healthcare system and is overly reliant on overseas-trained, non-consultant, hospital doctors to maintain its service. Dubbed 'The Irish Paradox' by the Organisation for Economic Cooperation and Development (OECD), Ireland's numbers of medical graduates per 100,000 population are the highest in Europe[42] but Ireland has the lowest number of medical specialists, i.e., consultants, per 1000 people in Europe at 1.49, which is 41% below the EU average of 2.53[5]. This again indicates a very significant problem with retention. Accounting for 43% of the medical workforce, internationally trained doctors have enabled Ireland to 'change the doctors in the system instead of changing the system' by improving hospital doctors' working conditions. No other EU country is more reliant on International Medical Graduates than Ireland[42] and now Ireland even struggles to retain these doctors who remigrate, and report being overworked, undervalued, discriminated against, and unable to access specialist training[43]. One potential underlying factor between working conditions and a failure to retain doctors is the negative impact such conditions have on doctors' mental health.

As well as emigration, exposure to poor working conditions and associated mental illness[28] has been linked to intention to quit medicine entirely[37]. Challenges related to recruitment and retention in Obstetrics and Gynaecology in Ireland have been specifically highlighted in a recent programme of research from researchers at University College Cork[44]. While this UCC study did not identify specific data on the intentions to quit or retire early of hospital doctors in other specialties in Ireland, in hospital consultants in the UK from a range of specialities, aged 41-60, work related pressures have been linked to early retirement intentions and this association is exacerbated by emotional exhaustion[45].

Many programmes of academic and practical work have been initiated in Ireland to better understand and tackle the unprecedented recruitment and retention challenges currently facing the healthcare system and their knock-on impact on doctors' mental health. These include the HSE's National Doctor's Training and Planning (NDTP) scheme[46], RCPI's Hospital Doctor Retention and Motivation Project[47] and RCSI's Doctor Migration Project[48], and RCPI's National Study of the Wellbeing of Hospital Doctor's in Ireland[49]. The Department of Health and the Health Service Executive have intensified recruitment in the past year and negotiations have recently been conducted by the Department of Health, the Health Service Executive, the Irish Medical Organisation and the Irish Hospital Consultants Association on a new consultant contract with the goal of increasing consultant numbers within the system and improving work-life balance and psychological wellbeing of doctors in Ireland. The approval of the new Sláintecare Consultant Contract was announced by the Department of Health on Dec 7th 2022[50]. The impact of the new contract on doctor's wellbeing, if it is formally rolled out in the system, will emerge in the coming years and should be a key indicator of benefit of the new model. Through these initiatives, progress is being made, in keeping with recommendations from the Strategic Review of Medical Training and Career Structure 2017-2018[51]. The National Doctors and Training Planning (NDTP) and the Royal College of Physicians of Ireland (RCPI) have been proactive in promoting flexible training, and less than whole time working at consultant level in recent years but much of the work needed to achieve a sustainable medical workforce lies ahead.

The death by suicide of two young Irish hospital doctors in training within 6 months of each other in 2012 was a shock to the nation and the medical profession[52]. Although sadly not isolated incidents, the fact that these suicides occurred so close together prompted action-oriented discussion among medical leaders and hospital managers. Together with a general perception of the existence of many burnt out or burning out peers among medical leaders, a national discussion in the media and social media on the problems of doctors' mental health led to the establishment of a programme of research centred on the mental health and wellbeing of hospital doctors. The research was supported by a stakeholder group with representation from all the postgraduate training bodies in Ireland and the Health Service Executive (HSE) Human Resources (HR) Directorate[49]. The research addressed in this PhD is part of this broader programme of research, known as the 'National Study of Wellbeing of Hospital Doctors in Ireland'.

The Distinct Role of the PhD Candidate Researcher within this Multidisciplinary Programme of Research

The stakeholder group primarily operated in a supporting role in this programme of research, demonstrating the willingness of the professional bodies to champion doctor's wellbeing, providing

financial support, facilitating access to their membership of doctors for study recruitment purposes and helping to pilot aspects of the data collection for the project. The group met in the first 2 years of the project two to three times annually in a formal setting. The president of each professional body wrote a personal "invitation to participate" letter to be sent to all members of their respective colleges along with the quantitative survey. Five practising hospital consultants and two hospital doctors in training from the stakeholder group did a trial run of the survey and three practising hospital consultants and two hospital doctors in training from the stakeholder group participated in pilot interviews for the two qualitative studies. In both instances they each provided feedback on the structure and experience of the survey and interviews from a user perspective but not from the perspective of academic content.

The two qualitative studies in this programme of research, Study two and Study three, were conceived of and designed by the primary researcher Gillian Walsh (GW) in collaboration with her academic supervisors Dr Yseult Freeney, Dr Simon Dunne and Dr Siobhain McArdle. Valuable real-world context and occupational health expertise was provided during the analysis and write up of the qualitative studies by Dr Blánaid Hayes (BH), a consultant occupational health physician with many years of experience working with hospital doctors in the context of work-related mental illness and burnout. The quantitative study, Study one of this programme of research was jointly conceptualised and designed by GW and BH. GW further managed the data collection for the study while BH took the lead on the analysis. BH completed the first draft of the manuscript and GW reviewed and contributed to subsequent and final drafts of the paper. Their distinct roles are reflected in the author contribution section of the final publication in the BMJ open journal

Finally, with the opportunity to reach a high number of doctors and, with the support of the professional bodies to ensure a representative response rate of doctors, from the perspective of the broader study of wellbeing, data were collected on a much wider range of variables than is reported in Study one and a number of other interrelated quantitative analyses and publications have been completed from this dataset.

Guiding Theory

This programme of research is grounded on selected theory from within the field of work stress, burnout, health behaviour and phenomenology. A brief overview of the theories used is presented in this section.

Siegrist's Effort-Reward Imbalance Transactional Model of Work Stress[53]

The links between work and health are well established. Work is good for health as long as certain conditions are met[54]. Working conditions should be good and safe, work should enable a good work life balance and should provide good training opportunities for progress, and workers should feel adequately rewarded for the effort they expend[55]. However, if the effort a worker puts into work is perceived by them to outweigh the rewards they receive, over time, this leads to stress. This is the basic tenet of Siegrist's Effort-Reward Imbalance transactional model of work stress. First proposed by German medical sociologist Siegrist, it has received considerable attention in occupational health studies because of its predictive power for adverse physical and mental health outcomes[53] . The model consists of three components: effort, reward and overcommitment. 'Effort' means extrinsic work demands. 'Rewards' are theorised to come from three sources: salary or wage (financial reward), career promotion or job security (status-related reward), and esteem or recognition (socioemotional reward). The model includes a personal style of coping with demanding situations termed 'overcommitment'. Overcommitment is defined as "a set of attitudes, behaviours and emotions that reflect excessive striving in combination with a strong desire to be approved of and esteemed"[56] and employees characterised by this coping pattern show excessive devotion to work. The ERI model postulates that high effort and low reward leads to strain and that this is exacerbated by overcommitment[53 57 58], see Figure 1 below.

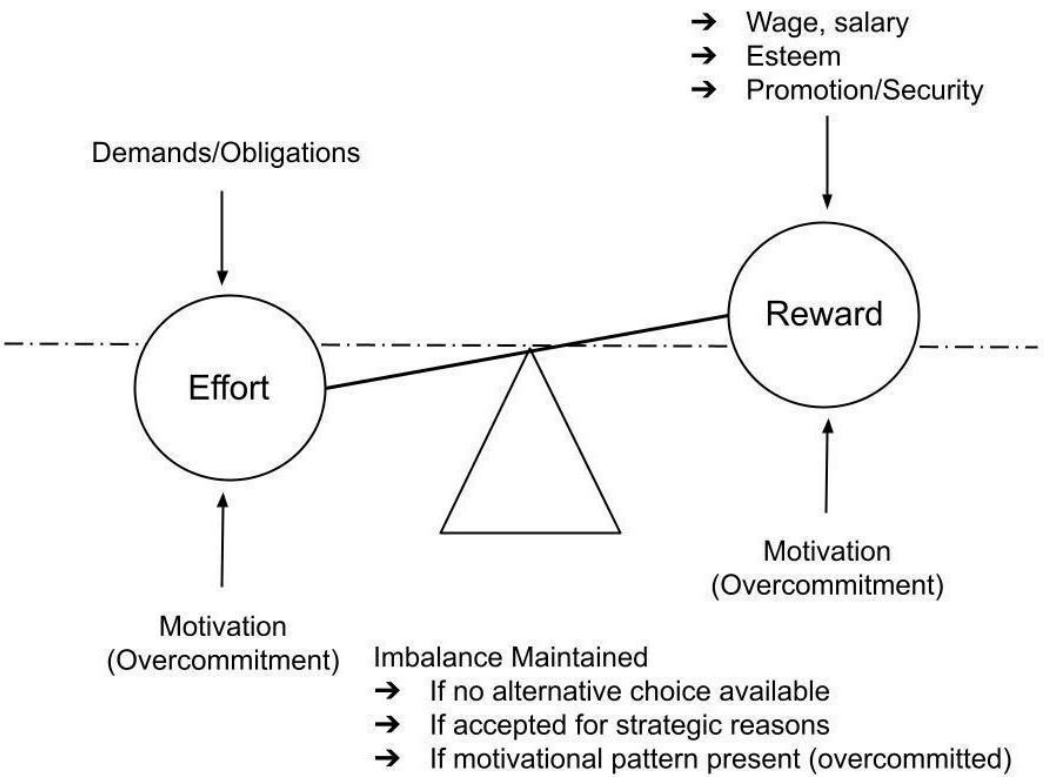

Figure 1: Siegrist's model of Effort Reward Imbalance[56]

High effort-reward imbalance is strongly associated with an increased risk of mental health disorders and poor physiological health[59] and has also been linked to reports of poorer patient care in a study of physicians[20]. Although models of work stress such as Karasek's Job demands model[60] may be more extensively tested than the ERI[61], the ERI model has been widely used in research on doctors, especially in Europe[62] and has gained considerable empirical support[53 63]. It has a further advantage in the specific context of hospital doctors in its focus on the intrinsic coping style of overcommitment. It is well established that doctors tend to be a highly conscientious group with a strong sense of duty to patients and colleagues and a tendency not to take time off work when ill[64 65]. The personality trait of conscientiousness has been linked with overcommitment[66] and it is part of what predisposes doctors to having a high threshold for taking sick leave. Due to this tendency in hospital doctors to be highly committed to their work, the ERI model is likely to be a useful conceptualisation for the study of work stress in hospital doctors.

Aside from the important measure of overcommitment, individual differences and internal processes are less developed in the ERI model than in other transactional models such as those by Lazarus and Folkman. For this reason, in order to access a broader description of the experience of work stress

from hospital doctors, and to allow for consideration of coping mechanisms employed by doctors in difficulty, Lazarus and Folkman's transactional theory of stress and coping was also consulted.

Lazarus & Folkman's Transactional Theory of Stress and Coping[67]

Within their general transactional model of stress, Folkman and Lazarus posit that stress is experienced when situational demands on an individual exceed their perceived ability to cope with the situation[67]. This model is useful as, extending beyond an interaction between environment and individual, it includes consideration of the mediating role of an individual's cognitive appraisal of a stressful event and their attempts to cope. Within this model, coping can be problem-focused (attempts to cope using rational, problem-solving type approaches) or emotion-focused (emotional-oriented coping approaches such as seeking emotional support from friends), see Figure 2.

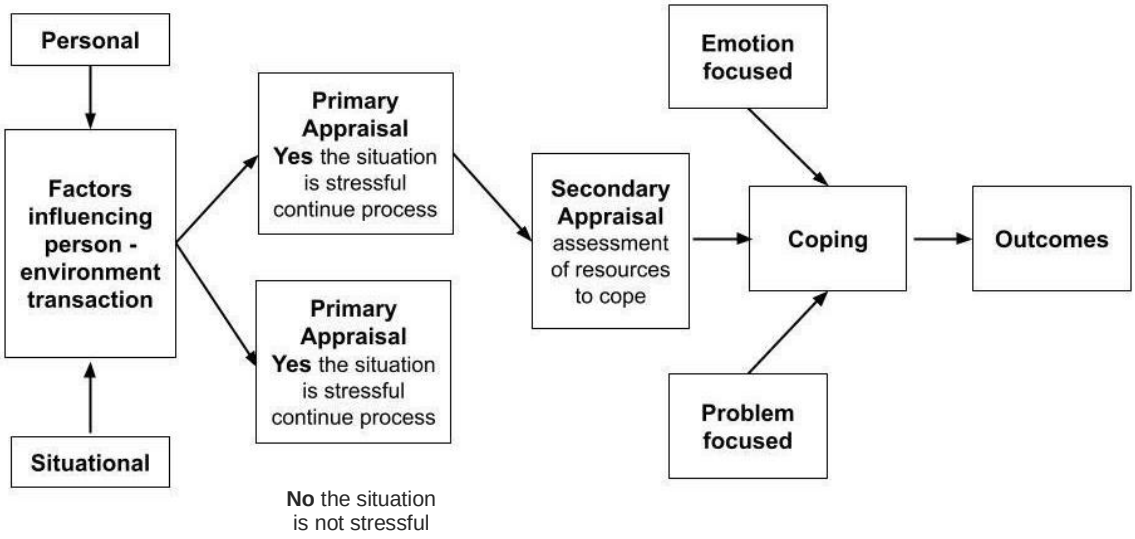

Figure 2: Lazarus & Folkman's Transactional Model of Stress and Coping[67]

Maslach's Model of Burnout

Prolonged exposure to high levels of work stress can lead to psychological illness such as anxiety and depression and to a specific negative psychological outcome called burnout. For the purposes of the present study the term 'work-related mental illness' will be used to describe any mental illness which may be related to work including anxiety, depression and general psychological distress but excluding burnout. Burnout will be conceptualised separately according to the model of burnout proposed by Maslach and Jackson. Burnout is generally understood as a syndrome or negative psychological state which occurs in the context of high occupational stress. According to Maslach's conceptualisation, burnout is a response to excessive stress at work, which is characterised by feelings of being

emotionally drained and lacking emotional resources—Emotional Exhaustion; by a negative and detached response to other people and loss of idealism—Depersonalisation; and by a decline in feelings of competence and performance at work—reduced Personal Accomplishment, see Figure 3.

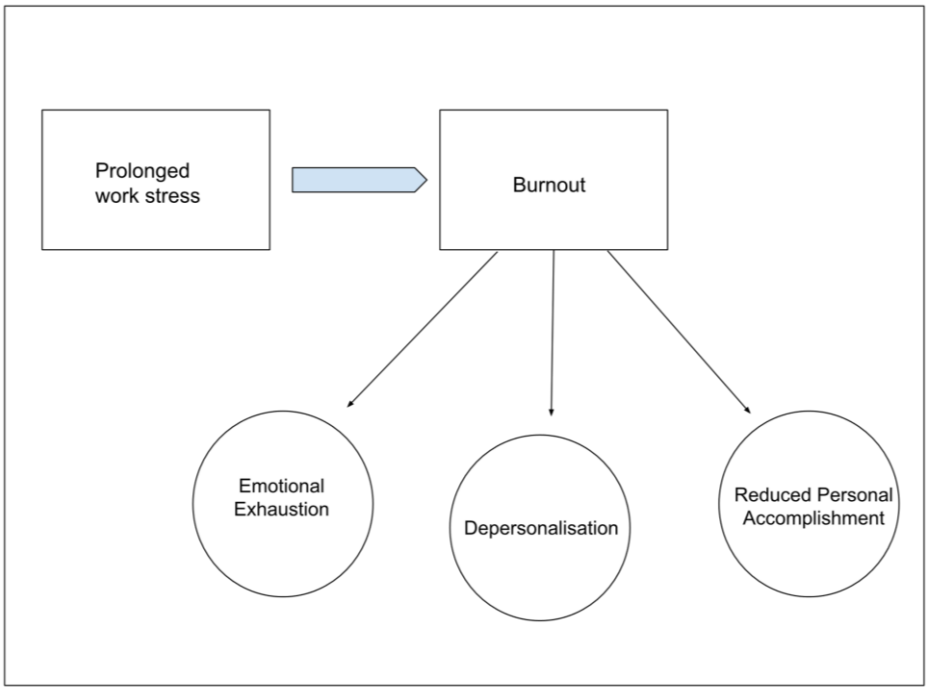

Figure 3: Graphical representation of Maslach's Model of Occupational Burnout[68]

Maslach theorised these six work characteristics as factors causing burnout and placed deterioration in employees' health and job performance as outcomes arising from burnout[69]:

1. Workload: excessive workload and demands, so that recovery cannot be achieved.
2. Control: employees do not have sufficient control over the resources needed to complete or accomplish their job.
3. Reward: lack of adequate reward for the job done. Rewards can be financial, social, and intrinsic (i.e., the pride one may experience when doing a job).
4. Community: employees do not perceive a sense of positive connections with their colleagues and managers, leading to frustration and reducing the likelihood of social support.
5. Fairness: a person perceiving unfairness at the workplace, including inequity of workload and pay.
6. Values: employees feeling constrained by their job to act against their own values and their aspiration or when they experience conflicts between the organisation's values.

Burnout has been presented as an increasingly prevalent phenomenon in modern societies and has received growing attention from both researchers and practitioners, since it was initially described in the 1970s[70-72]. Whether burnout should be considered an illness, however, remains a debated issue in the scientific and medical spheres[72]. Some propose that prolonged burnout will eventually lead to depression[73]. Others argue that burnout syndrome overlaps so substantially with depression, in terms of symptoms and diagnosis, that no distinction should be made between the two[74]. A 2015 longitudinal study investigating the distinctness of the constructs of burnout and depression found significant overlap and the authors Bianchi et al. suggest that, from a historical standpoint, the burnout construct may reflect a disciplinary divide between social psychology and psychiatry, rather than capturing a distinct pathological phenomenon. However, a very recent systematic review and meta-analysis found the strength of the association between the constructs of burnout and depression to be inconclusive[75].

Furthermore, the World Health Organization (WHO) has included burnout syndrome in the 11th Revision of the International Classification of Diseases[76] as a phenomenon exclusive to the occupational context, and it has been established as a legitimate justification for sick leave in some countries, for example Sweden[77]. In the context of the present study, the usefulness of the burnout construct is not dependent on its status as a medical diagnosis. It is instead helpful in providing a widely accepted framework within which to understand the negative psychological impact of prolonged work stress in organisational contexts. The predominant measurement tool associated with the model is "the Maslach's Burnout Inventory – Human Services Survey", which was designed for professionals in the human services and subsequently adapted for medical personnel has been validated for many human service populations[78]. This measurement tool has been widely used in national studies of hospital doctors[78 79] and, is considered the gold standard for measuring burnout[80] which makes it an appropriate instrument for the current study.

Help-seeking and the Health Belief Model

Burnout and work-related mental illness are treatable, yet many people do not seek professional help[81]. Considerable research has been conducted into the facilitators, barriers and interventions to improve help-seeking behaviours, with an emphasis on shortening the time from onset of symptoms to engagement with a healthcare professional[82] . Interventions in the general public have had little success in improving help-seeking behaviours. To date, only interventions aimed at improving mental health literacy have been effective in improving help-seeking attitudes, though not help-seeking behaviours[83] and lack of mental health literacy is not a barrier to help-seeking among doctors.

In their 2010 review, Scott and Walker highlighted an over-emphasis on the time aspect of help-seeking in the literature, an absence of comprehensive qualitative descriptions of help-seeking experience and a lack of theory-based research in the field[82]. As a result of the absence of theory-based research, no well-established model of help-seeking exists, and general health behaviour models remain the most useful in supporting our understanding of help-seeking in the context of ill health. Initially designed in the 1950s by a group of social psychologists at the U.S. Public Health Service to improve engagement in preventative health initiatives, the health belief model (HBM) is one of the most widely used models for understanding health behaviours[84]. It holds that an individual's belief about the threat of a disease or health problem, along with his/her belief in the effectiveness of the recommended course of action/health behaviour, will determine the probability that he/she will adopt the behaviour[85]. The model defines the key factors that influence health behaviours as an individual's perceived susceptibility to sickness, their perception of the consequences of sickness to them (perceived severity), the potential positive benefits of taking action, their perceived barriers to action, exposure to factors that prompt action (cues to action), and their confidence in their ability to succeed with a treatment and/or recover (self-efficacy), see Figure 4 below.

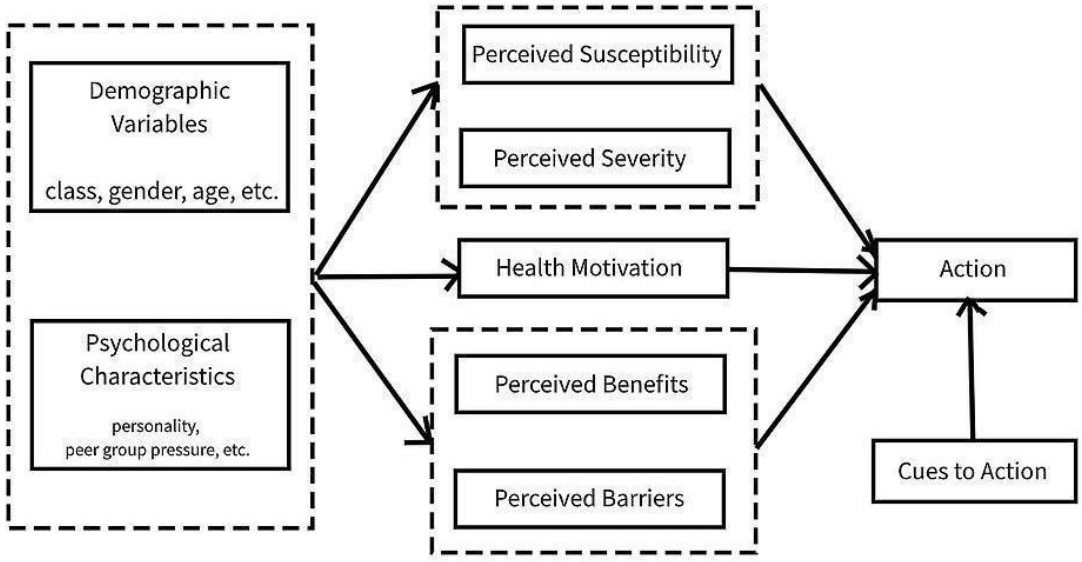

Figure 4: The Health Belief model depicting factors which influence health behaviour[85]

The strengths of this model are that it has been very widely used and empirical evidence supports its usefulness in understanding and promoting a wide variety of health behaviours, such as engagement with health care professionals for symptomatic ill health, engagement in screening programmes and adherence to treatment plans[86]. Criticisms of the model include its overemphasis on the individual to the exclusion of social and contextual factors and the absence of a role for emotional factors such as

fear and denial[61]. From existing literature on help-seeking in doctors, a number of social and contextual factors have been identified which may influence their help-seeking behaviours.

Before considering social and contextual factors which may influence help-seeking specifically in doctors, it should be noted that doctors [87] are less likely to seek help than the general public for burnout and mental illness and senior doctors are even less likely than their junior doctor counterparts to seek help[88]. If they do seek help it is delayed and often when their symptoms have become very advanced[89]. With respect to norms and specific contextual considerations, it has been observed that individuals within the medical profession seldom take sick leave and tend to underuse primary health care[90]. This may in part be due to maladaptive cultures learned in medical school and reinforced in healthcare organisations through modelled behaviour, sometimes referred to as 'the hidden curriculum', include a valorisation of performance and a culture of invincibility and presenteeism[15]. Presenteeism is a behaviour in which an employee is physically present at work with reduced performance due to illness or other reasons, and it is higher in doctors than other professional groups[91]. It is also associated with burnout[91]. Self-treatment is also more common among doctors than the general public[90], and doctors possess a strong sense of duty to colleagues and patients (find ref). Contextual factors which may have a bearing on help-seeking experiences in doctors include perceived acceptability of seeking help for mental illness within their work environment, perceived support from supervisors and peers and concerns related to public confidence in doctors more broadly i.e., among the public and within the media.

With respect to barriers to help-seeking in doctors a number of factors have been identified. Stigma, including self-stigma, lack of time, pressure of work - including long working hours and changing shift patterns - concern over professional reputation and negative career implications, and lack of awareness and availability of support[89 92 93 94 95] have been reported as barriers to help-seeking for burnout and mental illness among doctors. Doctors also tend to have a strong sense of identity connected with their role as carer and have difficulty assuming a sick role or patient role[89] . Whilst some of the needs of mentally unwell doctors mirror the needs of patients in general, focused research emphasises their specific needs related to confidentiality and stigma[96] .

Evidence on facilitators to help-seeking in doctors is much less well established. However, some studies have found a positive work environment and the availability of support services to be facilitators. Other potential facilitators uncovered through direct enquiry with doctors include the availability of accessible, external, confidential services, protected time, an open culture and supportive supervisors[89] . The health belief model considered in parallel with the social and contextual factors, which may influence help-seeking in doctors, forms part of the guiding theory for this programme of research.

In summary this programme of research is underpinned by Siegrist's effort reward imbalance model[57], Lazarus and Folkman's transactional theory of stress and coping[67], Maslach's conceptualisation of burnout[68] and the health belief model[86]. For a fundamental model of work stress Siegrist's effort reward imbalance model was consulted because of its particular relevance in research on doctors. This is due to the presence in the model of the overcommitment dimension. Within this model however individual differences outside of overcommitment and internal processes of the individual are not captured, for this reason and to allow for a broader understanding of the experience of work stress Lazarus and Folkman's transactional theory of stress and coping was also included as a grounding theory of the thesis. As well as work stress, the experience of work-related ill health and burnout are of central importance to the work of the thesis and Maslach's conceptualisation of burnout was chosen to guide this dimension of the work.

Furthermore, how doctor's seek help was expected to be a key element of their experience of work stress and burnout and is an aspect of the experience which is not captured in either Lazarus and Folkman's theory or Maslach's work. There is a lack of theory-based research in the field of help-seeking and a useful model of help-seeking has yet to be developed. For this reason, the general health behaviour theory was consulted to provide a fundamental basis for understanding doctor's health seeking behaviours in this context. The health belief model was the chosen model. Finally, as the health belief model may have an overemphasis on the individual to the exclusion of social and contextual factors, a number of important social and contextual factors which may influence the help seeking behaviours of doctors were identified from the literature and also serve to guide this

programme of research. See Figure 5 for a schematic which shows how these theories interrelate.

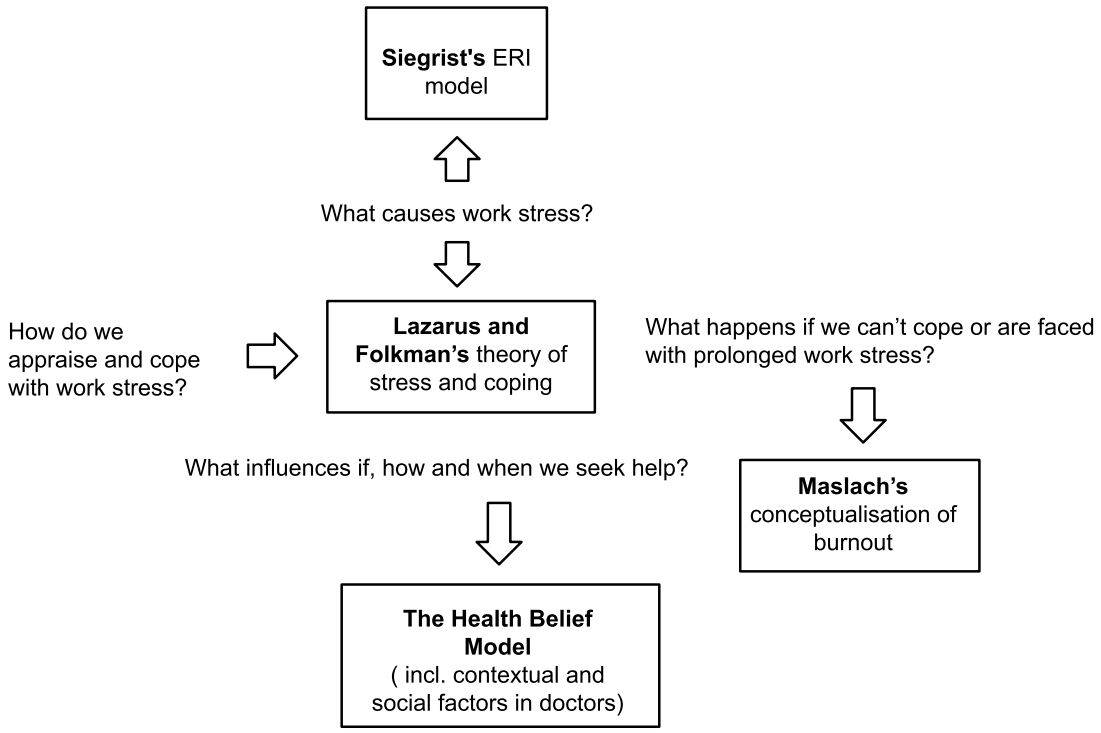

Figure 5: Schematic of the grounding theory underpinning this programme of research and how the different models and conceptualisations included interrelate

It was not the intention of this programme of research to test these models and theories, rather this theoretical framework is used to guide and underpin methodological choices within this programme of research. The theoretical framework described above was specifically drawn upon in the development of the quantitative survey instrument used to measure baseline prevalence of work stress and burnout in Ireland and in the development of the topic guide for the qualitative interview study which explored experiences of work stress, burnout and help-seeking in a cohort of doctors in order to identify opportunities for intervention. It was hoped however that this programme of research will expand our understanding of these long-established theoretical frameworks within the contemporary work context of hospital doctors. While the theories and models which underpin this programme of research provide useful insights and ways of conceptualising the antecedents and mechanisms of work stress and burnout, they fall short in providing a theoretical basis for understanding the aftermath of work-related mental illness and burnout including recovery.

Within the fields or occupational health and organisational psychology and as part of work stress and burnout research recovery has been approached from a position of burnout symptom reduction and stress management to avoid acute illness. Specific activities and processes which aid recovery and protect against burnout have been studied. The importance of activities that promote psychological detachment from work, relaxation, mastery experiences, and control during leisure time is emphasised by Sonnentag and colleagues[97 98]. Hülsheger and colleagues have shown that mindfulness can play a role in enhancing employee well-being and performance by facilitating effective recovery from work demands[99]. and within the Conservation of Resources theory it is posited that individuals can recover from work strain and burnout by focusing on personal resource conservation and restoration[100]. While these theories and research foci acknowledge the importance of individual and organisational factors in recovery, they are focused on immediate tangible outcomes and reduction of symptoms. They do not contend with the more profound, existential aspects of recovery such as development of a new sense of self, empowerment, and hope. This is a significant gap in research on work-related mental illness and burnout. This gap is simply depicted in Figure 6 below.

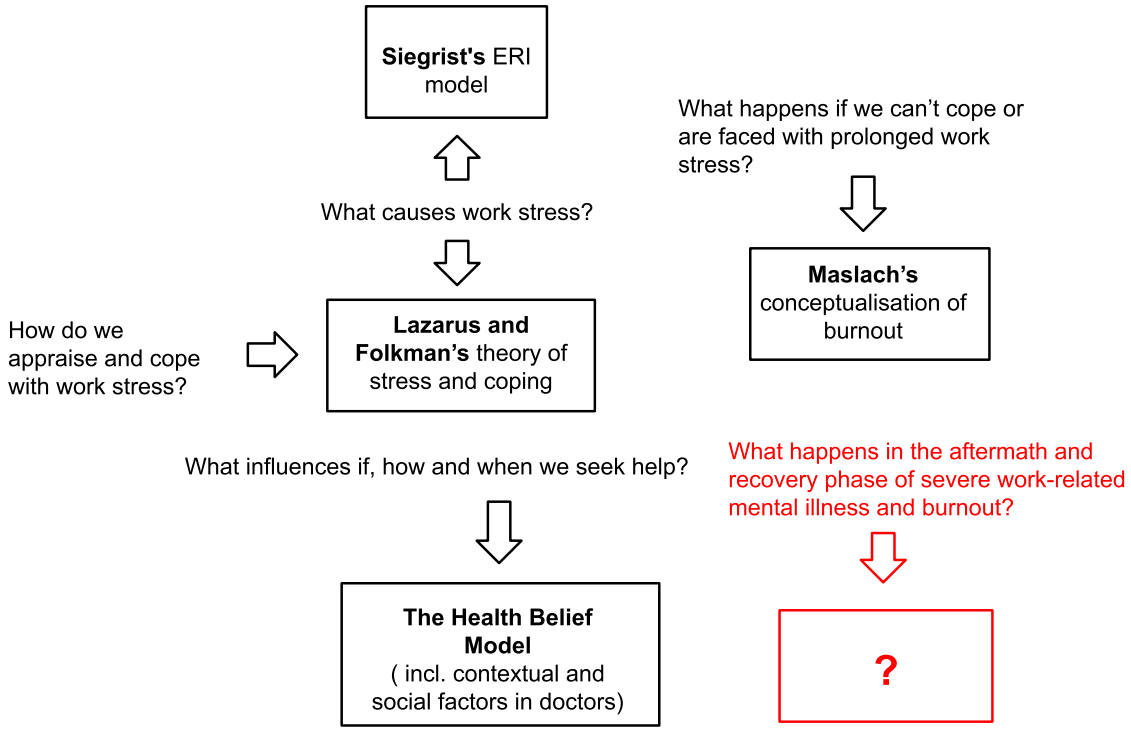

Figure 6: Schematic of the primary theoretical gap in the literature which this programme of research aims to address and how it relates to the grounding theory underpinning the research

Within the current literature on burnout and work-related mental illness in hospital doctors, there is an abundance of quantitative literature with an emphasis on prevalence, antecedents and health service consequences of burnout and work-related mental illness[78 79 101]. Despite a shift in focus towards intervention[102-104], in recent years, a number of important gaps in our understanding of burnout and work-related mental illness in hospital doctors remain. These include: **a dearth of research which includes the voice, perspectives and subjective experience of hospital doctors; a lack of understanding of the experiences of hospital doctors who suffer burnout or work-related mental illness which encompasses aftermath, recovery and return to work and a lack of consensus regarding which interventions targeting burnout and work-related mental illness should be prioritised for implementation.** The current programme of research aims to address these gaps. Furthermore, at the time this programme of research was established, while there was considerable interest and research activity in the field of burnout and work-related illness in hospital doctors internationally, there was **a lack of research in Ireland and no nationally representative prevalence data**. Irish prevalence data were needed to better understand the unique challenges faced in Ireland in relation to recruitment and retention[105 106] and to provide a basis for advocacy for doctors' health and wellbeing in Ireland. This next section will discuss the aims of this research with regards to contributing to the burnout and work-related mental illness literature in hospital doctors in addressing all of the gaps set out above.

A National Starting Point

While the prevalence of work stress and burnout in hospital doctors is well established internationally, when this study was initiated, a large, nationally representative estimate of work stress and burnout for hospital doctors in Ireland was lacking. It was not possible to make any comparison with the prevalence of work stress and burnout of doctors in other high-income countries. Neither was there a strong evidence base to support advocacy for improvements in hospital doctor's mental health and wellbeing in Ireland. Thus, the first aim of this programme of research is to address this gap by providing a nationally representative prevalence of work stress and burnout using instruments that will allow for comparison with prevalence in cohorts of doctors internationally.

As previously discussed, work stress, as conceptualised in the ERI by a mismatch between effort and reward, is higher in doctors than in the general population[62]. A very recent meta-analysis of effort-reward imbalance in physicians provides a synthesis of effort-reward imbalance in 41 studies from a number of countries including Germany, Switzerland, France, The UK, Norway, Sweden, Japan, China, Mongolia, the US and Brazil. All studies used Siegrist's ERI scale. Studies include physicians working in

multiple specialities and the most commonly studied specialties were surgery, internal medicine and anaesthetics. Within the review, studies which implemented the ERI measure using a 4-point Likert scale, as opposed to a 5-point Likert scale were deemed likely to reflect a more useful result. In the ERI questionnaire guide, Siegrist et al. strongly recommend the use of the 4-point scale to avoid respondents over-using a central, neutral answer if available. The combined prevalence of effort-reward imbalance across the studies that used the 4-point scale was 21.1%.

As previously discussed, burnout is also more prevalent among physicians than the general public[101] . A systematic review of burnout prevalence in doctors by Rotenstein and colleagues conducted in 2018, identified 182 studies involving 109,628 individuals in 45 countries for inclusion in their review[79] . Of these studies, 85.7% (156/182) used a version of the Maslach Burnout Inventory[107]. Due to variations in how being 'burnt out' was defined in the different studies, for comparison it is more useful to consider the burnout subcomponents of emotional exhaustion, depersonalisation and personal accomplishment, although even these were computed with some variation. The majority of studies reported an emotional exhaustion prevalence of 20-50%, a depersonalisation prevalence of 10-40% and a prevalence of low personal accomplishment of 5-40%. The quantitative arm of the present study aims to address the lack of prevalence data on burnout among Irish doctors and allow for comparison with physician cohorts internationally by assessing burnout in a nationally representative sample of Irish doctors using Maslach's Burnout Inventory and comparing our results with the results of this systematic review.

The Voice, Perspectives and Subjective Experience of Hospital Doctors

The abundance of quantitative literature within the field of burnout and work-related mental illness in hospital doctors has increased our knowledge and understanding of the prevalence, antecedents and health service consequences of burnout and work-related mental illness[78 79 101] and, in recent years, considerable evaluative research of interventions to tackle burnout and work stress has been undertaken[102-104]. The quantitative literature has generated several narrative and systematic reviews as well as meta-analyses that have made it possible to describe correlates of doctor burnout across regions and specialities[108] , accordingly, young physicians appear to be most at risk. Women, those in more isolated practices, and physicians working in emergency medicine[108 109] are also at increased risk, though the difference is not as pronounced as the difference seen between trainee and consultant grades, and most hospital doctors will experience extreme work stress and be vulnerable to burnout at some point in their career. Common personal characteristics of doctors, particularly those traits that helped them gain entry to medicine, such as perfectionism, dedication, compulsiveness, guilt and self-denial, may predispose them to burnout and work-related mental illness[28] . Much has also been

written about the influence of the environment, working conditions and substantial pressure within the medical system on the development of burnout[108] all within a culture of "no mistakes allowed." Blame and isolation in the face of medical errors and poor outcomes may lead to physician emotional injury, the so-called "second victim" syndrome, which has also been shown to be both a contributor to, and consequence of, burnout[110].

The quantitative literature has brought us far in our understanding of burnout and work-related mental illness in doctors, yet our understanding of, and insight into, the experiences of hospital doctors in this context is limited. Although it is well established that qualitative methodologies are more useful than quantitative methods when the goal is to understand the perception of experience of a complex reality within a given context[111], the numbers of qualitative studies of doctors' experiences of burnout and work-related mental illness are relatively low and particularly low for hospital doctors[108]. By their very nature, qualitative research methods document the 'voices' of participants[112] and, within qualitative research, participants' stories, told through their own words, are considered an effective way to access their lived experience[113]. The present programme of research aims to prioritise the physician's voice and subjective experience and to use their narrative accounts of burnout and work-related mental illness experiences as a primary source of evidence. Two of the studies conducted in this programme of research employ qualitative methods, which were carefully chosen to closely represent physicians' experience and to facilitate advocacy for the improvement of doctors' wellbeing.

Which Interventions are Most Needed?

Interventions targeting work stress, burnout and work-related mental illness can be classified as primary, secondary, or tertiary, according to their aim[114] (see Table 1). Primary interventions aim to reduce risk factors for employees. They are usually organisational interventions which tackle work environment factors perceived to contribute to work stress[115] e.g., changes to work practices, workload, work scheduling[116], teambuilding. Secondary interventions aim to enhance the ability of workers to manage stressful conditions by increasing awareness, knowledge, skills and coping resources[116] e.g., training in mindfulness and in dealing with difficult patients. Tertiary interventions aim to support recovery and minimise negative consequences in those already suffering from work stress or burnout[114] e.g., counselling, rehabilitation and return to work programmes.

Table 1: Taxonomy of interventions for workplace stress modified, with permission, from the original table authored by Clarke and Cooper 2004[114]

Intervention Level	Intervention Targets	Examples
Primary *Preventive and proactive* Goal: reducing potential risk or altering the nature of the work stressor before workers experience stress-related symptoms or disease	Stressors at their source; organisation of work; and working conditions	Job redesign, workload reduction, reduction of workflow inefficiencies, improved communications
Secondary *Ameliorative* Goal: to help equip workers with knowledge, skills and resources to cope with stressful conditions	Employee responses to stressors (perceived stress or strain)	Cognitive behavioural therapy, stress management training
Tertiary *Reactive* Goal: to treat, support, compensate and rehabilitate workers with enduring stress-related symptoms and disease	Short-term and enduring adverse health effects of job	Return to work programmes, employee assistance programmes, occupational therapy, medical stress interventions

Tertiary and secondary interventions, pitched at the individual level, are most common, and primary intervention, pitched at the organisation level, the least[117]. This is despite governmental policy recommendations that suggest that employers adopt a preventive, rather than a reactive, approach to the management of employee health risks[118] and, despite evidence showing that factors within the work environment, rather than individual attributes, are the major drivers of burnout in doctors[119]. Combining interventions at primary, secondary and/or tertiary level is considered to have high potential value in this context.

A shift in focus in physician burnout research in recent years towards intervention[104] has yielded a number of systematic reviews of interventions to prevent and reduce work stress and burnout in doctors[102 103 120 121]. Findings from these reviews have highlighted an over-concentration on secondary level, individual-focused interventions and, while most reviews found small but significant improvements in burnout levels overall, there remains a lack of clarity around which types of interventions are the most effective[102 103 120]. The overemphasis on individual level interventions has been criticised by physician researchers[122] and in health and safety reports from public agencies[123]. Many health systems have turned to resilience training, a secondary level, individual-focused

intervention, as a solution to burnout, but there is an ongoing debate about whether that is the right approach[124]. In their 2017 review article, which proposed the reframing of burnout as an organisational problem, academic psychiatrists Mackinnon and Murray state that: 'A distinction needs to be made between unavoidable occupational suffering (inherent in the physician's role) and avoidable occupational suffering (systems failures that can be prevented). Resilience training may be helpful in addressing unavoidable suffering, but it is the wrong treatment for the organisational pathologies that lead to avoidable suffering[124]'.

Furthermore, the need to consult doctors, who are the intended beneficiary of intervention to improve physician mental health and the 'experts of experience' of physician burnout and work-related mental illness, has been highlighted in the literature[122]. It is vital to study the perspectives of hospital doctors and their subjective experiences of burnout and work-related mental illness to understand which interventions are most needed to tackle work stress and burnout in this population. It is also important to categorise potential interventions according to the level of intervention i.e., primary, secondary or tertiary. Identifying which interventions are most needed is not only important to reduce burnout, it is also important at a resources level. It is important to avoid wasting time, effort and money on interventions which may not be effective or may not even be needed.

In summary, there is no clear quantitative evidence which demonstrates superior effectiveness of available interventions to tackle burnout and work-related mental illness in doctors. There appears to be an overemphasis on secondary level, individual-focused interventions in hospitals, and in the literature. As such, there are calls from researchers, physicians and health and safety professionals to turn attention to primary level interventions and there is a lack of consultation with physicians around the interventions most needed. The current research aims to address some of these issues by applying deductive qualitative methods to provide insight into which interventions have the potential to be most impactful through the analysis of: 1) doctors' subjective experiences of work stress and burnout with a focus on opportunities for intervention, and 2) their perspectives with respect to which interventions are most needed to tackle work stress and burnout in hospital doctors.

Experiences of Burnout and Work-related Mental Illness, which include Aftermath, Recovery and Return to Work

The medical profession and the health systems they work within are motivated by a desire to prevent and reduce the occurrence of burnout and work-related mental illness and this has, justifiably, driven research interest, predominantly, in the areas of prevalence and antecedents of burnout and in recent

years intervention[102-104]. However, complete elimination of work-related mental illness is profoundly complex and challenging. Doctors are likely to continue to experience these negative health outcomes of prolonged exposure to work stress, to some degree, for a long time to come. Therefore, minimising their impact when they do occur and supporting doctors' recovery remains important, but research on the experience of burnout and work-related mental illness and its aftermath is not common.

Quantitative research is emerging in this area, focusing on factors associated with return to work[125] among workers from different professional groups (not including doctors). There has also been some evaluation of interventions[104] and therapies[126] to promote recovery from burnout. In a 2017 review by Kärkkäinen and colleagues[125], which aimed to uncover facilitators and barriers to return to work following burnout, in workers from various professions (not including doctors), only 10 studies were found matching their inclusion/exclusion criteria. There was significant variation in study design and study endpoints of these studies, and it was not possible to draw any clear conclusions in the review. However, a summary of the individual study findings gives some early quantitative insight into this return-to-work experience, albeit not specifically for doctors[104]. Improving job–person match through employee–supervisor communication facilitated return to work, but only in younger participants after long-term follow-up[125] .Low control at work predicted no reduction in sick leave[125]. Male gender was significantly associated with sooner return-to-work and full-time return-to-work within 6 months[125]. Covert coping (avoidant behaviour in conflict situations) towards supervisors and/or workmates predicted a higher risk of no reduction in sick leave. A borderline significant result of high overcommitment was associated with reduced sick leave[125]. Burnout rehabilitation through cognitively-oriented behavioural rehabilitation and Qigong (a Chinese system involving meditation) showed significantly reduced sick leave rates at 12-month follow-up; a result that was later confirmed at the 3-year follow-up[125]. According to separate studies by Ekstedt et al.[127 128] and Sonnenschein et al.[128] recovery from fatigue, predicted return-to-work.

With respect to tertiary recovery interventions, in a 2017 systematic review and meta-analysis, Ahola and colleagues[104] identified 14 studies of interventions aimed at alleviating burnout symptoms and supporting return to work in various workers, again, not including doctors. Of the interventions reported in the review, 14 (78%) were individually focused and four (22%) had combined individually- and occupationally-focused approaches. The most common procedure, used in six interventions, was based on cognitive-behavioural therapy (CBT) and, while most studies showed reduced burnout symptoms for the intervention groups at follow-up, the same reductions were also observed in control groups, and no reduction in time to return-to-work was found. However, a group CBT programme(three days during six months) which was combined with career counselling (three

sessions during six months), as well as self-initiated preventive measures, was related to decreased emotional exhaustion and increased professional accomplishment at one month follow-up, compared to the control group who received no treatment[129]. The rest of the individually focused interventions had employed either physical/physiological methods or other psychological methods. Group therapy, either an analytic or experimental orientation, based on psycho- and socio-drama methods (16 days during nine months) was related to a decrease in burnout score in one month's follow-up when compared to control group on a waiting list[104]. Also, a psycho-didactic workshop on experimental-reflective processes and skills development was related to a decrease in burnout symptoms in three months' follow-up when compared to the control group who were placed on a waiting list for the workshop[104].

A common component in the four combined interventions was the meetings with workplace representatives in order to promote the changes that should be made in the work situation of the burnout cases. These were combined with traditional therapies or group stress reduction programmes. In these studies, a reduction in burnout was measured in the group participating in the work-place meetings compared with a control group participating in the therapy only. The review authors highlighted the need for more studies, in particular research on organisational level components. An earlier review of burnout therapies by Korczak et al.[126] found limited evidence of efficacy for cognitive behavioural therapy (CBT) but not for other therapies and identified a natural recovering process in doctors which occurred over time and was not attributable to any specific therapy[126]. As well as a need for better quality, randomised and properly controlled therapy evaluations, and a need to examine to what extent therapies are thwarted by the conditions of the workplace, Korczak et al. identified a need to better understand the natural processes of recovery experienced by burnout sufferers[126]. This will be important, as, once this process is understood, it can be stimulated and encouraged through educational and therapeutic intervention. While more quantitative research is needed on the aftermath and recovery phases of work-related mental illness, especially in doctors, another dearth of research exists with respect to our fundamental understanding of the experiences of the aftermath of burnout and work-related mental illness for doctors. Qualitative research, which includes recovery and return to work, is needed to develop this deeper understanding of these later stages of the experience.

A systematic review and metasynthesis of qualitative research, which included physician perspectives on aspects of burnout, was published by Sibeoni et al. in 2019[108]. It identified 33 studies but found no qualitative study that explicitly explored physicians' experiences of burnout. The systematic review also highlights that, even within qualitative research on burnout and work-related mental illness, there has been an emphasis on antecedents and protective factors, as opposed to a study of experience

itself. Furthermore, the review did not identify any qualitative research which included the help-seeking, recovery or return to work phases of burnout and work-related mental illness. Sibeoni et al. stated that 'when burnout was considered in the studies included in the metasynthesis, it always involved descriptions or definitions of burnout but never access to experience' and they highlighted the need for 'future qualitative research to explore in depth the subjective experience of physicians who have experienced burnout'. In 2014, academic psychiatrists García-Arroyo and Domínguez-López highlighted the importance of studying physician's subjective burnout experiences and highlighted the inadequacy of quantitative methods to do so[130] . They emphasise the need for qualitative methods to answer the 'how' and 'why' of physician burnout experience, to generate unexpected and useful understandings of the phenomenon.

Within the range of qualitative studies touching on some aspect of physician burnout or work-related mental illness, very few approached the subject matter in an in-depth way, selecting instead qualitative methods which allowed for identification and classification of key themes, patterns and trends across multiple samples of data representing physician perspectives. Many different methodological approaches exist within qualitative research which are useful to achieve different research aims. In-depth, phenomenological qualitative designs aim to go beyond the identification of key themes, trends and patterns within a dataset to uncover the universal essence of a phenomenon or to explore in detail how people make meaning within their social and personal worlds[131]. It is concerned with the how and why of experience and can provide deep insight and rich description of a phenomenon or an experience shared by more than one individual. In depth, phenomenological studies of doctors' lived experience of burnout and work-related mental illness in the literature are few, and we only identified one study which included the recovery phase of experience, and this was focused on hospital doctors in training[132]. Abedini et al. provide deeper insight into aspects of the recovery experience upon which the present study aims to build.

Abedini et al. conducted an interpretive phenomenological analysis of internal medicine trainees to identify factors promoting recovery from burnout and factors that assist with the subsequent avoidance of burnout[132]. Their analysis found, and differentiated between, two different types of burnout, with differing recovery and avoidance methods. They classified burnout that was caused by self-limited circumstances and environmental triggers as 'circumstantial' burnout. They found that recovery from such burnout arose through resolving workplace challenges, nurturing personal lives and taking time off. Some of the workplace challenges cited included difficult interpersonal relationships and excessive workloads, which often resolved themselves when the trainee rotated to their next placement. The second type of burnout they described was caused by a loss of meaning in medicine and an uncertain professional role. They called this type of burnout 'existential' burnout.

Recovery from existential burnout was achieved by first recognising they had experienced a burnout and feeling validated by the realisation, by connecting with patients and colleagues, by rediscovering or finding new meaning in medicine; and by redefining their professional identity.

One of the symptoms characteristic of burnout can be detachment and depersonalisation from patients, and this study found that reconnecting with patients on a human level contributed to recovery. Many trainees in the study attributed recovery to refocusing on the areas in medicine from which they could derive meaning in their lives; for some, this was helping patients, for others, it was engaging in scientific inquiry. Reframing the unrealistic expectations they had to perform to their internalised ideal of the 'good doctor' was found to contribute to recovery. Learning how to set boundaries with patients to protect themselves was another factor in recovery and something they felt they should be part of their training. Other factors which contributed to recovery, which are likely to be related to their career stage as trainees, included increasing clinical competence and autonomy, finding inspiring senior role models and focussing on their career development. To add to the work of Abedini et al., in future research, it will be important to understand, from a theoretical perspective, how the process of recovery, return-to-work and return-to-life in general, occurs. It is also important to focus research on the senior cohort, as they have not been researched in the context of aftermath and there are many differences between the trainee and consultant groups with respect to the nature and structure of their professional lives (see Appendix 1) and the stressors they are most exposed to[23]. Furthermore, although levels of psychological distress and burnout have been found to be greater among doctors-in-training than in consultants[133 134] and research has consequently been focused on the trainee cohort, levels of burnout and psychological distress among the senior cohort are still high[133 135] and more than double that of the general public[133]. Junior doctors are more likely to seek professional help than their consultant peers, leaving the senior cohort more vulnerable to advanced presentations of mental illness and reaching a 'breaking point' before seeking help[88]. The difference in prevalence between consultants and doctors-in-training can largely be explained by numbers of hours worked, greater career uncertainty for junior doctors, and a greater struggle with the interface between work and personal lives of junior doctors due to the nomadic nature of the training years[23 136]. It has also been suggested that this difference may be partly related to the attrition of doctors in difficulty throughout training leaving a more resilient or grittier cohort in the group that qualify[137]. There is no doubt that the current model of training can be harmful, both psychologically and financially, to those who do not 'survive' and requires reform. However, it is important to note that consultants who endure this model of training, in particular those in the middle or latter stages of their careers, with no history of mental illness, may represent a particularly resilient group for whom going through a mental health crisis is likely to be experienced as a major, negative life event. We

propose that experiencing such an event, at an advanced career stage, has the potential to have a far reaching, negative psychological impact and that coming to terms with such an event requires great personal effort.

A further reason for providing in-depth descriptions of the burnout experience from the senior cohort related to challenging the culture of non-disclosure of mental illness. Doctors tend to be deeply private about their experiences of mental illness[95] to the extent that fear of exposure of mental illness has been linked to suicide[92]. There is, however, a growing awareness of the value of sharing physician's lived experience of mental illness, in particular, senior physicians' disclosure of personal experiences of mental illness and recovery[18 138-140] . Where senior physicians' personal stories of mental illness and recovery have been shared, as part of training workshops for junior doctors, there was evidence of improved self-reflection, mental health attitudes and help-seeking attitudes of participants[141 142].

The aim of the current study is to provide an in-depth, descriptive, phenomenological analysis of the subjective experience, for senior hospital doctors, of coming to terms with a mental health crisis perceived to be caused or exacerbated by extreme work stress. We examine the psychological process of coming to terms with a mental health crisis for the first time in this context, deepening our understanding of senior hospital doctors' experiences of the aftermath of work-related mental illness, including recovery and return-to-work. Theoretically, we aim to explore the mechanisms of how doctors come to terms with this negative life event and the natural processes involved. Finally, from a practical perspective, we aim to shed light on this experience in the context of improving support for doctors through recovery. A clearer understanding of the natural psychological processes involved in coming to terms with work-related illness and burnout has the potential to be of value to health practitioners, and the hospital doctors in their care, as they work together through recovery and return to work.

Research Objectives

In order to address the gaps in the literature laid out above, the primary aims of the current programme of research were: 1) to understand the prevalence and experience of burnout and work-related mental illness of hospital doctors in Ireland, and 2) to identify priority interventions targeting work stress and burnout in this group. The following specific research objectives were established to achieve these aims:

1) To determine the prevalence of work stress and burnout of hospital doctors in Ireland;

2) In consultation with hospital doctors, to determine which interventions are most needed to tackle issues of work stress and burnout among hospital doctors in Ireland; and

3) To provide an essential description of coming to terms with a burnout or mental health illness as a hospital doctor, which is perceived to be caused or exacerbated by work stress and which includes aftermath, recovery and return to work.

In achieving these objectives, the inclusion of the physician's voice and subjective experience was established as a key emphasis of the PhD. The project was embedded within a broader programme of research called 'The National Wellbeing of Hospital Doctors in Ireland Study' and, within this framework, a secondary goal of the PhD was to inform intervention for the improvement of hospital doctor's mental health and wellbeing through the stakeholder group which includes the medical professional bodies and the HSE HR Directorate. This PhD was completed in three studies with three associated academic papers, two of which have been published and one which is scheduled for submission to peer review in early 2023. An overview of the impact of the two published papers and plans for the third paper are provided in Table 2 below.

Table 2: Overview of academic papers produced as part of this PhD

Paper	Journal (year)	Impact Factor	Citations	Altmetric	Twitter	News
Doctors don't Do-little: a national cross-sectional study of workplace wellbeing of hospital doctors in Ireland	British Medical Journal Open (2019)	3.007	61	58 In the top 5%	56 tweets 138,639 followers	The Irish Independent The Irish Times Drivetime RTE
Doctor, how can we help you? Qualitative interview study to identify key interventions to target burnout in hospital doctors	British Medical Journal Open (2019)	3.007	36	41 In the top 5%	71 tweets 210,877 followers	
"I would have blamed myself, but going back I can see it wasn't me" - A qualitative, Descriptive Phenomenological Analysis (DPA) of doctors' reflective processes in recovery from burnout and mental health crisis	Target: Qualitative Health Research (Submitted)	4.233	N/A	N/A	N/A	N/A

Overview of Methods

In this section, a high-level overview of the methods used to meet the objectives of this programme of research and the rationale for their selection is described. A summary of the methods mapped to each research objective is provided in Table 3. A more detailed description of the methods of each individual study is provided within the associated academic paper in the following chapters

Table 3: Overview of research methods mapped to research objectives

	Research Objective	Guiding Theory	Method	Population	Data collection	Analysis	Academic Paper
1	Determine the prevalence of work stress and burnout of hospital doctors in Ireland	• The ERI transactional model of work stress • Maslach's model of burnout	Quantitative, cross-sectional cohort study	N = 1746 hospital doctors in Ireland 949 consultants 797 doctors-in-training	Online and postal survey incl: • ERI 16 item • MBI – HSS(MP) • Single items: Work ability, Presenteeism, Work-life balance, Desire to practice medicine • Demographics	- Prevalence - X^2 and ANOVA between groups - T test between group with burnout and group without - Bivariate logistic regression of factors associated with burnout	*Doctors don't Do-little: a national cross-sectional study of workplace wellbeing of hospital doctors in Ireland (BMJ Open 2019)*
2	In consultation with hospital doctors, determine which interventions are most needed to tackle issues of work stress and burnout among hospital doctors in Ireland	• Folkman & Lazarus's transactional model and stress and coping • Maslach's model of burnout • The Health Belief Model of health behaviour	Deductive, qualitative study	N = 32 hospital doctors purposely selected from 53 volunteers* (mix of gender, grade and specialty)	- Semi-structured interviews of experiences of work stress and burnout and preferences of interventions most needed. - Emphasis on rapport and natural, conversational style - Topic guide consulted in few cases	- Thematic analysis, Braun & Clarke - Deductive framework to long list interventions - Prioritisation exercise to short list - Clarke & Cooper taxonomy to organise	*Doctor, how can we help you? Qualitative interview study to identify key interventions to target burnout in hospital doctors (BMJ Open 2019)*
3	Provide essential description of coming to terms with a burnout or mental health crisis as a hospital doctor, perceived to be caused or exacerbated by work stress	• Husserl's philosophy of phenomenology	Inductive, phenomenological study	N = 6 consultant hospital doctors subset of cohort of 32 who met the inclusion criteria for the DPA	- Semi-structured interviews of experiences of mental health crisis and burnout including helps-seeking, recovery and return to work. - Emphasis on rapport and natural, conversational style	Giorgi Amadeo's Descriptive Phenomenological Analysis (DPA)	*"Just a cog in a big machine" - A qualitative, Descriptive Phenomenological Analysis of doctors' reflective processes in response to mental health crisis and burnout (Target QHR 2023)*

*Volunteers were recruited through the quantitative survey. Survey recipients were invited to participate in further qualitative research on the topic of hospital doctors' wellbeing and invited to provide contact details if interested.

Objective 1) Determine the prevalence of work stress and burnout of hospital doctors in Ireland

To determine baseline nationally representative prevalence data on work stress and burnout, a quantitative cross-sectional approach was taken. This involved a large scale, 3 wave, national survey using validated instruments. Guiding theoretical models and associated measurement instruments were selected based on the selection criteria listed in Table 4.

Table 4: Criteria for the selection of guiding theoretical models and associated validated instruments for the measurement of work stress and burnout in National survey of hospital doctors

Selection Criteria	
1	Previously applied within a similar economic context (high income)
2	Previously applied to work stress or burnout in another cohort of health workers (preferably hospital doctors)
3	Previously tested on a nationally representative sample of doctors
4	Of particular theoretical relevance to hospital doctors based on extant literature
5	Considered acceptable length and comprehensibility following completion by a sample of hospital doctors (trainees and consultants)

Two theoretical models with associated validated questionnaires were selected to meet this study objective. These were the Effort Reward Imbalance (ERI) transactional model of work stress[56] and Maslach's Burnout Inventory of Health Services Professionals adapted for Medical Personnel[107]. The ERI model was selected because it met all the selection criteria above including number 4 'of particular theoretical relevance to hospital doctors based on extant literature' because of the focus in the model on the intrinsic coping style of overcommitment. Hospital doctors are a highly dedicated, conscientious group[64 65] and this trait of conscientiousness has been linked with overcommitment[66]. Anecdotal evidence that hospital doctors in Ireland are an overcommitted cohort was highlighted by the hospital doctor members of the stakeholder group for the present study. It was decided by the principal investigator, in consultation with the wider research team and the stakeholder group to use the ERI model to provide, in addition to a prevalence of work stress, an understanding of levels of overcommitment in this population and to explore to what extent burnout may be associated with overcommitment in this population.

Maslach's Burnout Inventory – Human Services Survey (Medical Personnel)[107] was chosen because it has been validated extensively for human services populations because it has been adapted for populations of medical personnel and because it has been widely used in national studies of hospital doctors[78 79]. It is considered the gold standard for measuring burnout[80].

Further to meeting the primary objective of this study, four single-item measures were included to meet the objectives of a separate piece of work within the National Programme of Hospital Doctors in Ireland. These were: 'desire to practise medicine', presenteeism, work-life balance and work-ability. All single item measures had been used in previous studies of hospital doctors. The rationale for including these measures was to assess their association with burnout in this cohort and to provide and understanding of how hospital doctors in Ireland compare with their peers internationally in terms of their desire to practise, work-life balance, perceived work-ability (compared to their lifetime best) and the culture of presenteeism.

Study Sample Size

A key objective of this study was to obtain a representative sample of hospital doctors to determine national prevalence of burnout. In order to achieve this, a stratified, random sample of 3,164 doctors was invited to complete the quantitative survey. The required sample was calculated using the Raosoft sample size calculator[143] for a 95% CI, an acceptable margin of error of ±5% and an expected prevalence of psychological distress of 20%, based on typical rates identified in research on doctors in other countries[79]. This number was then doubled to allow for an estimated response rate of 50%. The participants were registered with one of nine national postgraduate medical training bodies in Ireland and included both consultants and trainee doctors in either Basic Specialist Training (BST-equivalent to residency in North America) or Higher Specialist Training (HST-equivalent to fellowship in North America). In order to be invited to participate in this study, the participants had to work mainly in hospitals, public clinics or residential institutions (e.g., psychiatry). Additionally, they had to be fully registered and actively working as either consultants or trainees in a formal training programme in anaesthetics, medicine (including emergency medicine), obstetrics/gynaecology, ophthalmology, paediatrics, pathology, psychiatry and surgery. Thus, those working exclusively in private practice and those who were retired or on sick leave/maternity leave at the time of the survey were excluded. The Faculty of Radiology opted out of the study, although a radiologist did come forward to be part of the qualitative study, likely through word of mouth.

Data Collection

A target response rate of 50% was set for the survey and the sample size calculation was based on this target. A 50% response rate to a survey can be difficult to achieve in any population but is particularly so in studies on doctors[144] . In order to maximise response rate, we offered both online and postal completion options to all doctors in the sample in three waves and communicated them through the presidents of the respective participating professional bodies to demonstrate their endorsement of the study. We piloted and modified the survey with consultant and trainee doctors for usability, we used various incentives, including good quality pens for trainees, continuing professional development credits for consultants and a draw. Finally, we applied the Dillman total design method[145] to maximise completion of the postal version of the survey. Further detail on data collection is provided in the methods section of study 1.

Analysis

A more detailed description of the analysis is provided in the methods section of the paper to study 1. This section discusses the rationale for the choice of analyses. As this was the first national study of work stress and burnout in Ireland, it was important to report descriptive data of all variables initially. Differences in the professional lives, stressors and work structures of consultants, higher specialist trainees and basic specialist trainees (see Appendix 1 for an overview of working life as a trainee and working life as a consultant in Ireland), and differences in the prevalence of work stress and burnout reported internationally, made it important to explore differences between these groups in study 1. This was done using Chi-square and one-way ANOVA analysis, adjusting for age and sex. It was also important to understand any differences across work-related factors in those meeting criteria for burnout, and those who did not, to better understand work-related factors within may need attention in the Irish context. This was explored using t-tests between the groups. It was also considered useful to understand which factors relating to the individual may be associated with meeting the criteria for burnout to understand which types of interventions would be most useful for which types of doctors. To explore this, factors associated with meeting the criteria for burnout (binary) were included in a bivariate logistic regression model with burnout set as the dependent variable and age, sex, grade, years of practice, workload, work ability, work life balance, current desire to practise medicine, ERI and overcommitment as independent variables. Bivariate correlation was performed to analyse the association of the independent variables.

Objective 2) In consultation with hospital doctors, determine which interventions are most needed to tackle issues of work stress and burnout among hospital doctors in Ireland.

A qualitative design was selected to identify the interventions most needed to tackle issues of work stress and burnout among hospital doctors in Ireland because of the emphasis within the present programme of research on the inclusion of the physician's voice. This design was also appropriate as we were interested in uncovering what interventions are needed more generally rather than testing the efficacy of individual interventions. They are working within the systems in which work stress and burnout occur and have the most first-hand knowledge of the particular problems faced by hospital doctors in the context of work stress and burnout. As the objective of the research was practical, with the intention to provide a specific, short list of priority interventions, a focused, deductive qualitative approach was devised. A schematic overview of the approach is provided in Figure 7.

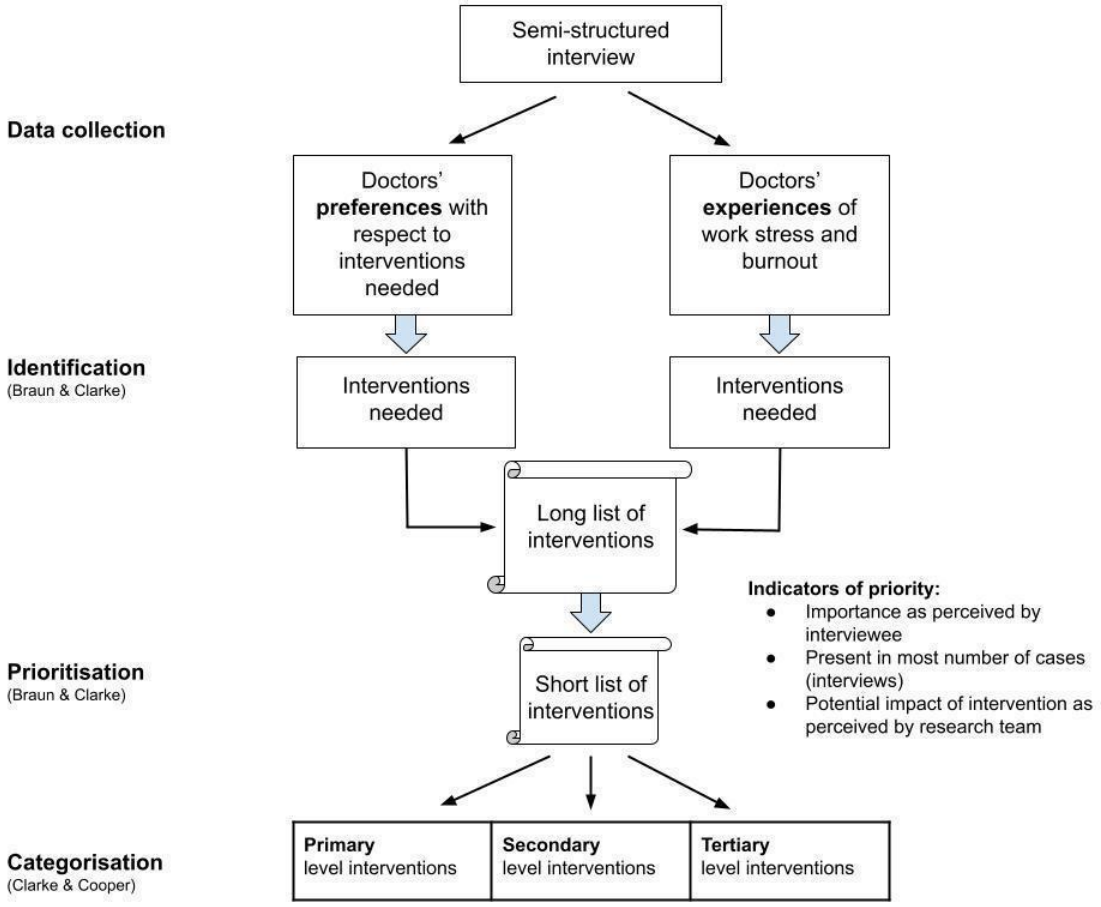

Figure 7: Overview of Data collection and Analysis method to meet research objective 2)

Firstly, a straightforward step of directly asking a mixed sample of hospital doctors their subjective preferences and suggestions regarding the interventions they perceived to be most needed was considered appropriate. Secondly, in order to cross-reference these data on their perspectives with a second source of data, and to bring an objective dimension to the research, personal accounts of hospital doctors' work stress and burnout were gathered and analysed independently to draw out opportunities for intervention from within their experiences. A topic guide based on Folkman and Lazarus's transactional model of stress and coping[67], Maslach's model of burnout[107] and the Health Belief Model of health behaviour[84] was used to guide the development of interview prompts, to be used only if needed. However, the interview style was intentionally conversational with an emphasis on natural dialogue, building rapport, open-ended questions and allowing the interviewee to direct the conversation as much as possible. The study was carefully designed to capture an open discussion of doctors' experiences of work stress and burnout and their suggestions with respect to the interventions most needed in a non-directive way. No specific interventions were mentioned by the interviewer and no reference was made to the different levels of intervention which exist.

Analysis of both data sources generated a significant number of potentially useful and often overlapping interventions and associated themes. To arrive at a shortlist of the interventions most needed and their associated themes, a prioritisation exercise was conducted. Braun & Clarke's (2013) thematic analysis[146] was used as it is a very flexible, and well tested method for identifying and analysing themes across a qualitative dataset of multiple cases. It includes clearly prescribed methods for identifying the importance or 'keyness' of a particular qualitative finding across multiple cases. When determining priority interventions in the present study the following indicators were used: the importance of the potential intervention as perceived by the interviewee, the presence of the intervention in two or more cases across the dataset (more cases indicates greater priority) and the potential impact of the intervention as perceived by the researchers.

Recruitment and Sample

The final section of the questionnaire included an invitation to the qualitative study. Respondents were asked if they would be interested in making themselves available at a later stage for qualitative interviews on doctors' wellbeing. They were given an email address and asked to submit their contact details directly to the researchers to register their interest. A doctor's decision to participate in qualitative research was intentionally unlinked with the quantitative data they submitted in the questionnaire. Of the 53 doctors who volunteered, a purposive sample was selected to include a mix

of gender, specialty, career stage, hospital type and geographical location. Sixteen consultants and 16 doctors in training were included. Data saturation was expected to be achieved with less interviews but 16 was chosen to ensure a representative mix of gender and career stage and a good mix of the other criteria.

Objective 3) Provide an essential description of coming to terms with a burnout or mental health illness as a hospital doctor, which is perceived to be caused or exacerbated by work stress and which includes aftermath, recovery and return to work

To provide an in-depth analysis of experience as it occurred for our study participants, a phenomenological approach was chosen. A descriptive phenomenological approach was preferred over interpretive phenomenological approaches as it has been argued that descriptive approaches are more suitable when the phenomenon under study is not well researched, when a first, essential description is sought[147 148] , and when the goal of the research is to uncover a faithful, 'a near-real picture' of the phenomenon under study[149 150]. For the purposes of this study, we consider the phenomenon under investigation; 'how senior doctors come to terms with mental illness', to be a psychological phenomenon. For this reason, we selected a method which was designed for application to psychological phenomena[131]. The chosen method is the descriptive, phenomenological, psychological method devised by Amadeo Giorgi[131]. Giorgi's methodology is anchored in the phenomenology of Husserl[151] and Merleau-Ponty[152] and is designed to elicit and describe the essential structure of a psychological phenomenon. The method consists of clearly articulated steps to maintain fidelity to participants' experiences[153]; and involves the careful transformation of personal narrative to key meaningful contents. Individual participant accounts are taken at face value and treated as an expression of experience itself[154].

A key rationale in selecting this method was related to our goal of giving precedence to the physician's voice and subjective experience. The full method is not described here, as it is adequately described in the associated paper, however there are two key elements within this method which amplify its effectiveness at representing the experiences very closely, and these are described below. These are the steps in the method called 'phenomenological epoché' or 'bracketing' and 'free imaginative variation'. Bracketing is the active setting aside, by the researchers, of all existing knowledge about a phenomenon so that its 'essential' elements can be grasped prior to and during analysis[131 155 156]. While it is acknowledged that a complete setting aside of all prior knowledge is impossible, the researchers can minimise the influence of prior knowledge and preconceptions by following prescribed measures within the method[131 153]. These measures are an active reflection on and discussion of biases of

researchers; piloting and review of data collection and analysis steps by research colleagues to identify bias in the researcher; adjustment of behaviour based on these reviews to minimise bias and frequent reflection on biases throughout the research project. For example, on review of the audio of a pilot interview, one of the research team felt that I was overly sympathetic towards the doctor on parts of their negative experience and a little rushed or directive at other times based on her prior knowledge and personal biases. These behaviours were adjusted to better 'bracket' her experience and prior knowledge, maintain a neutral attitude towards participant experiences during the interview and to adopt a slower more open-ended style, allowing interviewees to direct the conversation at their own pace. A further pilot interview was conducted and reviewed, and the full research team was satisfied with the adjustments made.

Further to bracketing, another tool within the analysis phase of the DPA that is instrumental in remaining faithful to the essence of the phenomenon under study is the use of 'free imaginative variation'. Free imaginative variation is part of the process of transforming the data from its raw state i.e., the interviewees' words and everyday expressions, to psychologically expressed statements which more explicitly draw out relevance to the phenomenon under study. In this step, the analyst must rewrite the piece of data (interview extract) to more explicitly describe the parts of the experience which speak to the psychological parts of the experience and the parts of experience related to the phenomenon under study. In the current study, the phenomenon is 'coming to terms with a burnout or mental crisis perceived to be caused or exacerbated by work stress'. Following the first transformation of the data, the researcher must reread it and ensure that no meaning relevant to the phenomenon under study has been omitted and no meaning that is not present in the raw data has been added. Researcher additions and omissions can be subtle. The researcher must continue to conduct subsequent iterations of the transformation process until they are satisfied that an accurate transformation of the data has been achieved. In the transformation process, relevant material preceding or subsequent to the raw data extract should be considered by the researcher in the transformation process, as having read through the whole interview, they have a better understanding of the meaning of the extract in the specific context of the participant. See Table 5 for an example of how raw data were transformed in study 3 using free imaginative variation. Another step of the transformation, which is not related to free imaginative variation, but which can be seen within the process depicted in Figure 8 is the transformation of the specific to the general with respect to parts of the data which do not directly relate to the psychological component of the experience, or to the phenomenon under study. The purpose of this is to make the experiences of different participants

more comprehensible in a collective way. For example, cardiac problems related to stress or inflammatory bowel disease related to stress, both would be transformed to ‘physical signs and symptoms of stress’.

Table 5: Example of phenomenological transformation of raw data using free imaginative variation

Data Extract	DPA transformation 1	DPA transformation 2	Constituent (s)
P1: 'I said, I have to look after myself and I have to be forthright, and this is what I have to do. So, I withdrew some aspects of the clinical services, patients were affected, and I had enormous difficulty with management, and they were actually onto me saying when was I going to start this back.'	P1 was convinced at the time that he had to take significant steps to protect himself and his health and that he had to do it in a strong and determined way. He highlights the seriousness of the steps he took, noting that he cancelled some of the services he provides which had a negative knock-on effect for patients. This caused enormous difficulty with management who continued to press him to return to the previous work volumes and services	P1 took strong and determined action to protect himself from overwork and ill mental health by withdrawing himself from a portion of his work, cancelling some services. He is aware that his actions to protect himself were bold and affected some patient's care, but he felt that he needed to take these steps for the sake of his own health. Taking this action caused great difficulty and conflict with management who did not readily accept P's action and continued to request that he return to previous workload levels.	Rearranging priorities – doctors rearranged their priorities for the first time, placing themselves, their health and their personal relationships above their work Self-protection and establishing boundaries – doctors began to practice self-protection and establish clear boundaries at work
P2: 'You shouldn't bring negative energy from the workplace into those relationships, and I probably brought, even though I wouldn't be verbal with [my spouse] they could probably see that I was burned out, exhausted not in a great place and I was probably bring negativity from excessive work load pressure home which I shouldn't have done.'	P2 realises that they were bringing negative energy from their work into their relationship which put further pressure on the relationship. So not only were they spending excessive time at work instead of in their relationship they were bringing negative energy from work into their relationship and were exhausted when they was outside of work, using their time outside of work to rest and recover enough to be able to go back into work as opposed to using their time and energy outside of work to nurture their relationship.	Reflecting on their marriage breakdown, P2 realises they were bringing negative energy from their work into their relationship. They believe their spouse was aware that they were burntout. They admit that their excessive workload pressure was causing them to offload negative energy in their relationship and they believe that it was wrong of them to do this, and that it is wrong to do this in general to one's personal relationships in life.	Self-reflection in the context of the experience – participants demonstrated an awareness of themselves and how they acted within the experience Self-reflection on a broader scale – their experiences led doctors to reflect on themselves and how they live their lives in a deeper way, beyond the specifics of the experience

Personal Reflexivity

For all three studies in this programme of research and, in particular the two qualitative studies, it was necessary to address researcher bias. The full research team for both studies met on multiple occasions to disclose and discuss our potential biases. During data collection and analysis, every effort was made to reflect on, and set aside, these biases in order to gather, analyse and represent the data from as neutral a perspective as possible. As the principal researcher in both qualitative studies, my biases were the most likely to influence the outcome of the research. In the following paragraph, I present my reflections on my personal biases.

As a researcher, my personal interest in the topic of hospital doctor's wellbeing and mental health has three main influences. Firstly, after enjoying an interesting and challenging early career in applied physics, I was forced to redirect professionally due to the closure of much of Ireland's tech industry during the global recession of 2007-2009. I began working in the health sector and with the Royal College of Physicians of Ireland (RCPI) on quality improvement programmes and health services research. While working with RCPI, many of my colleagues and friends were hospital doctors both at trainee and consultant level. I became keenly aware of their challenges with training, working conditions and personal health and wellbeing. Secondly, I have a deep respect for the determination and hard work of my sister who trained and now works as a consultant Anaesthetist. Ours is not a medical family and she embarked on the difficult road of becoming a hospital doctor without knowing what lay ahead. Listening to the experiences of my sister and her medical friends gave me a further layer of insight into the unique challenges faced by hospital doctors.

Finally, as a patient, I have experienced first-hand the dedication and frustration of hospital doctors on the front line and struggled to understand the negative attitude which at times was directed towards them by the public. These attitudes appear to have become more measured and more frequently directed at the system rather than individual doctors in recent years. However, medico-legal cases against doctors are still on the rise in Ireland. Because of these experiences, and my exposure to the lives of hospital doctors, when the opportunity to take a significant role in the research of the National Study of Wellbeing of Hospital Doctors in Ireland presented itself, I was happy to immerse myself in the project. My connection to the participants in this study brings with it a natural bias. My research collaborators and I attempted to remain aware of and set aside our biases at all stages throughout this programme of research. To minimise bias, interviewees in the study were

recruited through the survey and not directly by researchers, their data for both the quantitative and the qualitative arms of the study was anonymised and there was no prior relationship between the interviewer and the interviewees. Further reduction of researcher bias was managed more specifically within the study methodologies and is described in more detail in the methods sections of the study papers.

Chapter 2 – Study 1

Doctors don't do little: a national cross-sectional study of workplace wellbeing of hospital doctors in Ireland

This study was published in BMJ Open in March 2019. The publication is available, open access.

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Keywords: wellbeing, doctor, occupational stress, burnout, work ability

Word count: 3712

Abstract

Objectives: To measure levels of occupational stress, burnout, work-life balance, presenteeism, work ability (balance between work and personal resources) and desire to practise in trainee and consultant hospital doctors in Ireland.

Design: National cross-sectional study of randomised sample of hospital doctors. Participants provided sociodemographic data (age, sex, marital status), work grade (consultant, higher/ basic specialist trainee), specialty, work hours and completed workplace wellbeing questionnaires (Effort Reward Imbalance [ERI] Scale, overcommitment, Maslach Burnout Inventory) and single item measures of work ability, presenteeism, work-life balance and desire to practise.

Setting: Irish publicly funded hospitals and residential institutions.

Participants: 1749 doctors (response rate of 55%). All hospital specialties were represented except radiology.

Results: 29% of respondents had insufficient work ability and there was no sex, age or grade difference. 70.6% reported strong or very strong desire to practise medicine, 22% reported good work-life balance, 79% experienced workplace stress, with effort greatly exceeding reward, exacerbated by overcommitment. Burnout was evident in 30.7% and was significantly associated with male sex, lower desire to practise, lower work-ability, higher presenteeism, higher ERI ratio and greater overcommitment. Apart from the measures of work ability and overcommitment, there was no sex or age difference across any variable. However, effort-reward imbalance and burnout were significantly lower in consultants than trainees.

Conclusions: Hospital doctors across all grades in Ireland had low levels of work ability, work-life balance, high levels of work stress and almost one third experienced burnout indicating suboptimal work conditions and environment. Yet, most had high desire to practise medicine. Measurement of these indices should become a quality indicator for hospitals and research should focus on the efficacy of a range of individual and organisational interventions for burnout and occupational stress.

Strengths and limitations of this study

- This study provides new information on levels of burnout and other indices of workplace wellbeing in a national cohort of hospital doctors in Ireland following a period of substantial cutbacks in health expenditure and workforce depletion
- The utilisation of standard instruments and single item questions previously used elsewhere allows for comparison with other research on doctors
- The use of the effort-reward imbalance (ERI) instrument, encompassing a measure of overcommitment, is particularly apt in a study of doctors
- The good response rate and the range of specialties represented validates the results as being representative
- The study is limited by the fact that it is cross sectional in design and causality cannot be inferred from the associations observed

Introduction

The links between work and health are well established. Work is good for health as long as certain conditions are met[54]. However, when work poses excessive demands with little control and support, its impact on both physical and mental health can be negative, leading to stress related disorders, depression and other common mental health issues[19 60 157-159]. Moreover, there is strong evidence of a causative[158 160] relationship between effort reward imbalance and poor health.

Worldwide, the hospital as a workplace has experienced many changes with growing scientific and technological developments. In The Republic of Ireland, the financial and personnel constraints imposed by the economic recession (2008) translated into greater work volume, tighter deadlines and dissatisfaction of service users[161], with the hospital sector described as 'chaotic', 'over-managed[6] and under-led', and failing to deliver consistently high quality patient care[7]. Previous studies show that systemic weaknesses, often contributed to by human error, have contributed to very negative outcomes for patients[8 9 162], further contributing to a stressful environment for those working to provide care. This situation is further exacerbated by increased medical emigration[37] and a national shortage of nurses and doctors, for whom hospital posts in Ireland are now less attractive[23] at a time of greatest need, with a growing and ageing population and a greater burden of chronic diseases[163].

Previous studies show that longer working hours and low job satisfaction are associated with burnout[164], a syndrome resulting from chronic occupational stress[74] and defined by emotional exhaustion, depersonalisation, and a diminished sense of personal accomplishment(PA)[107]. Internationally, prevalence of burnout has been reported as high as 52%. However, comparison of prevalence of burnout in doctors in other studies is challenged by the fact that burnout has been reported both as a continuous and dichotomous variable[79 107 165], using different combinations of its constituent domains, variations in specialty and grade composition of the doctor population under study[25 166-169], and with variable response rates. The growing evidence on the links between burnout and poor care make for a compelling case to try to address the causes, with potential dual benefit to both patients and doctors[30 170].

The prevalence of psychological wellbeing in hospital doctors in Ireland has previously been described and illustrates significant differences between grades, with junior trainee doctors experiencing greater distress than their senior, consultant colleagues[133]. Mean hours worked were 57, with trainees working significantly longer hours than consultants. In the context of the challenging psychosocial environment described above, we were also keen to explore workplace wellbeing in this population with a view to identifying work issues affecting workplace wellbeing and helping to guide employers and training bodies towards effective interventions. This study set out to measure parameters of workplace wellbeing, including occupational stress, overcommitment (coping style characterised by excessive work-related commitment), burnout, work life balance, presenteeism (working through illness or injury), workability (balance between work and personal resources) and desire to practise in a population of hospital doctors in Ireland, to explore differences between grades and to discuss the findings in the context of international trends.

Methods

Design

The study was a national cross-sectional survey of hospital doctors working in the Republic of Ireland.

Sample

The sampling method has been previously described in detail. The participants were registered with one of nine national postgraduate medical training bodies in Ireland and included both consultants and trainee doctors in either Basic Specialist Training (BST – equivalent to residency in North America) or Higher Specialist Training (HST– equivalent to fellowship in North America).

Hospital doctors who met the inclusion criteria (fully registered with a postgraduate medical training body and working in the Republic of Ireland as either consultants or trainees in anaesthesia, emergency medicine (EM), medicine, obstetrics and gynaecology (O&G), ophthalmology, paediatrics, pathology, psychiatry and surgery) were stratified and subsequently randomised. The Faculty of Radiology opted out of the study.

Data collection

The data collection was performed both by post and online in 2014[133]. Participants provided data on demographics (age, sex, nationality) employment stage/ grade and years of practising medicine.

Measures

Workload was measured by averaging *hours per week over 2 consecutive working weeks in the past month*[169].

Single items on desire to practise medicine, presenteeism, work-life balance, and work ability (defined below) were included, and all have previously been used in studies of doctors elsewhere[133 171-173].

Desire to practise was assessed by '*please rate your current desire to practise medicine'* with the option of a 5-level Likert scale (strong desire to regret). This measure was previously used in a cohort of British medical graduates[171].

Presenteeism (working through illness or injury) was assessed using a single statement '*there were occasions when I think I should have taken time off for illness but did not do so*' to which respondents responded with a 5- point Likert scale (strongly agree to strongly disagree). This measure has been similarly used in a population of United States resident physicians[172].

Work-life balance reflects satisfaction and good functioning at work and at home with a minimum of role conflict[174] and was assessed with a single item '*my work schedule leaves me enough time for my family/ personal life*' on a 5-point Likert scale (strongly agree to strongly disagree). This measure has been similarly used in a large survey of United States physicians[168].

Work ability measures the degree to which individuals are able to cope physically and mentally with the demands of work. The Work Ability Score uses a single item from The Work Ability Index[175] '*how would you rate your current work ability compared with your lifetime best*' with numerical response options on an 11 point scale (0-10), where a score < 6 is considered as insufficient work ability[176]. This measure has been similarly used in a survey of Dutch hospital doctors[173].

Work stress was assessed using the Effort Reward Imbalance Questionnaire (ERI; 16-items; 4-point Likert scale) on three dimensions: effort (3 items, score: 3-12), reward (7 items, score: 7-28) and overcommitment (6 items, score: 6-24) perceived in one's professional role[177]. The effort-reward (ER) ratio is computed by dividing the score in effort by score in reward, when corrected for the unequal items of effort and reward. An ER value (range 0-4) close to zero indicates a favourable situation (relatively low effort, relatively high reward), a value of 1 indicates effort reward balance while values beyond 1 indicate a critical condition of high effort spent that is not met by the rewards received or expected. High effort reward imbalance is strongly associated with an increased risk of mental health disorders and with poor self-rated health[63 158 160 177]. The percentage of the population in whom effort was not balanced by reward was calculated to determine a crude estimate of the prevalence of occupational stress, although the cut-off for ER does not represent a clinically validated threshold[178].

Burnout was assessed by the Maslach Burnout Inventory (MBI) and was defined by a high level of emotional exhaustion (EE; the feeling of being emotionally exhausted and overwhelmed by work) combined with either a high level of depersonalisation (DP; the loss of empathy and the emergence of cynicism in one's care for others) or a low level of personal accomplishment (PA; feeling of competence in one's work with people). The 'EE+ 1 rule' has been suggested as the most effective way of diagnosing burnout i.e. scoring high scores on both EE and DP or high scores in EE combined with low scores on PA. The MBI is considered to be the Gold Standard for measurement of burnout and has been widely used internationally in studies of doctors[79].

In our sample the internal consistency was satisfactory for all scales (Cronbach's α=0.72 – 0.83).

Statistical analyses

All the analyses were performed using commercially available statistical software (SPSS version: IBM SPSS for Windows, version 21.0). Descriptive analyses were performed initially and categorical group differences between consultant, HST and BST groups were tested using Chi-square. Mean differences for continuous variables (e.g., emotional exhaustion) were tested using a one way ANOVA, adjusting for age and sex. Differences across work-related factors in those meeting criteria for burnout and those who did not were analysed using t-tests. Factors associated with meeting the criteria for burnout (binary) were included in a bivariate logistic regression model, with the burnout (binary) set as the dependent variable and age, sex, grade, years of practice, workload, work ability, work life balance, current desire to practise medicine, ERI and overcommitment as independent variables. Bivariate correlation was performed to analyse the association of the independent variables.

Ethics

The study protocol was approved by the Royal College of Physicians of Ireland's (RCPI) Research Ethics Committee in December 2013 (RCPI RECSAF 20).

Results

In total, 1749 physicians participated in the study (response rate=55%, range 33-63% between specialties). The respondents mainly held Irish nationality (85%) and though there was no sex preponderance overall, consultants were predominantly male (61%) and trainees predominantly female. (Table 6)

Work ability

The mean level of work ability for the respondents as a whole was 6.5 (SD=2.0) and a one way ANOVA showed no significant difference in the mean level of work ability between grades (F (2, 1734) = 0.437, p=0.646). Overall, 29.2% of respondents indicated an insufficient level of work ability. (Table 6)

Presenteeism

Overall, 78% of the study population indicated that they had engaged in presenteeism. A one way ANOVA revealed significant differences between the groups (F (2, 1737) = 6.22, p = 0.002) with consultants (75.6%) reporting significantly lower levels of presenteeism than HSTs (80.8%) or BSTs (80.9%) (Table 6).

Work-life balance

When asked if their work situation left them enough time for their family / personal life, only one in five doctors felt this was the case (22.2%) while three in five (59.7%) disagreed with the assertion. A one way ANOVA revealed significant differences between the groups with consultants indicating significantly higher work-life balance (28.3%) compared with HSTs (13.9%) and BSTs (16.5%) (F (2, 1739) = 32.6, p <.001) (Table 6).

Desire to Practise

When asked to rate their desire to practise medicine, 70.6% of doctors described it as strong or very strong. Consultants were more likely to rate their desire to practise positively (73%) than both HSTs (71.4%) and BSTs (63.4%). The difference was significant between consultants and BSTs (F (2,1737) = 9.17, p <.001). (Table 6)

Table 6: Sociodemographic, work and workplace wellbeing (single item) data compared by grade using one-way ANOVA

	Consultants		**HST**		**BST**		**Total**		**(F)p**
	N/ *AM*	%/ SD	N/ *AM*	%/ SD	N/ *AM*	%/ SD	N/ *AM*	%/ SD	
Sex									
Male	574	60.4%	178	21%	130	34.7%	882	50.4%	
Female	375	39.5%	245	57.8%	244	65.1%	864	49.4%	
Age									
30 and under			82	19.3%	267	71.2%	349	20%	
31-40	114	12%	318	75%	97	25.9%	529	30.2%	
41-50	440	46.3%	20	4.7%	9	2.4%	469	26.8%	
51 and over	389	40.9%	2	.5%			391	22.4%	
Workload									
Mean	*54.17*	*15.09*	*61.08*	*15.47*	*59.63*	*13.02*	*57*	*7.74*	*F=38.4****
Years of practice									
Mean	*12.11*	*7.26*	*3.31*	*1.96*	*1.69*	*.86*	*15.08*	*7.26*	*F=665.27****
Work Ability Score									
Insufficient	267	28.1%	126	29.7%	118	31.5%	511	29.2%	
Sufficient	683	71.9%	298	70.3%	257	68.5%	1238	70.8%	
Mean	*6.5*	*2.1*	*6.4*	*2.1*	*6.4*	*2.0*	*6.5*	*2.0*	$F=0.44^{NS}$

Presenteeism									
Strongly agree	342	36.2%	200	47.4%	151	40.6%	693	39.8%	
Agree	373	39.4%	141	33.4%	150	40.3%	664	38.2%	
Neutral	70	7.4%	24	5.7%	23	6.2%	117	6.7%	
Disagree	118	12.5%	44	10.4%	37	9.9%	199	11.4%	
Strongly disagree	43	4.5%	13	3.1%	11	3%	67	3.9%	
Mean	*2.1*	*1.16*	*1.88*	*1.10*	*1.94*	*1.06*	*2.01*	*1.13*	*F=6.22***
Work life balance									
Strongly disagree	147	15.6%	122	28.8%	78	20.9%	347	19.8%	
Disagree	353	37.4%	180	42.5%	164	43.9%	697	39.9%	
Neutral	177	18.8%	63	14.9%	70	18.7%	310	17.7%	
Agree	237	25.1%	54	12.7%	57	15.2%	348	19.9%	
Strongly agree	30	3.2%	5	1.2%	5	1.3%	40	2.3%	
Mean	*2.63*	*1.11*	*2.15*	*1.02*	*2.32*	*1.01*	*2.45*	*1.09*	*F=32.49****
Desire to practise medicine									
Very strong	260	27.4%	101	23.8%	78	20.8%	439	25.2%	
Strong	430	45.3%	201	47.4%	158	42.1%	789	45.3%	
Lukewarm	197	20.7%	89	21%	98	26.1%	384	22.1%	
Weak	41	4.3%	14	3.3%	14	3.7%	69	4%	
Regret	17	1.8%	18	4.2%	24	6.4%	59	3.4%	
Mean	*2.07*	*.9*	*2.17*	*.97*	*2.32*	*1.05*	*2.15*	*.96*	*F=9.17****

****=p ≤ .01 ***=p ≤ .001**

Work stress (ERI)

The mean score for effort (ERI) for the whole group was 9.9 (SD=2.0), with significant differences between grades (F=21.98, p< .001), and scores highest for consultants and lowest for BSTs (Table 7).

The mean score for reward for the group was 17.4 (SD=3.9), with significant differences between grades (F=30.9, p<.001) and highest scores for consultants and lowest for HSTs (Table 7).

The mean score for overcommitment for the group was 15.7 (SD=3.5) and there was no difference between the grades on this measure (F=2.87, p=.57). (Table 7)

The effort of work was not balanced by the rewards of work as evidenced by an effort reward ratio in the overall sample of 1.4 (SD=.6). A one way ANOVA revealed significant differences between the grades (F (2,1597) = 9.07, p<.001), with effort reward imbalance being higher for HSTs than for BSTs or consultants. (Table 7).

Burnout

Over half (52.3%) of the respondents had high emotional exhaustion (52.3%) and this was more prevalent in BSTs (61%) and less prevalent in consultants (45.7%) (χ^2=49.07, p<.001). The ANOVA confirmed significant differences in mean emotional exhaustion score between the grades (F (2, 1676) =19.59, p<.001). (Table 7)

High depersonalisation was reported in 28.6% of the sample, and this was more prevalent in BSTs (43.3%) and less prevalent in consultants (18.3%) (χ^2=128.07, p<.001). The ANOVA confirmed significant differences in depersonalisation score between the grades (F (2, 1680) = 73.57, p<.001). (Table 7)

Low personal accomplishment was reported in 34% of the sample. A higher proportion of consultants expressed low levels of personal accomplishment (40.4%) than HSTs (28.6%) or BSTs (24.7%) (χ^2=44.16, p<.001). The ANOVA confirmed significant differences in personal accomplishment score between the grades (F (2, 1629) = 24.03, p<.001). (Table 7)

Using the aforementioned EE+ 1 rule, the overall level of burnout in this population was 31% with significant between-grade differences highlighting a lower prevalence of burnout in consultants (24.4%) than in HSTs (38.1%) and BSTs (38.4%) (χ^2=38.59, p<.001). (Table 7)

Table 7: Workplace wellbeing scales (ERI, MBI) compared by grade using one-way ANOVA/ Pearson's Chi square

	Consultants		**Higher Specialist Trainees**		**Basic Specialist Trainees**		**Total**		**χ^2(F) p**
	N/ *AM*	%/ SD	N/ *AM*	%/ SD	N/ *AM*	%/ SD	N/ *AM*	%/ SD	
Effort Reward Imbalance (ERI)									
Effort mean	*10.1*	*2.0*	*9.8*	*1.9*	*9.3*	*1.9*	*9.9*	*2.0*	21.98***
Reward mean	*18.0*	*3.7*	*16.3*	*3.9*	*17.0*	*3.8*	*17.4*	*3.9*	30.87***
Overcommitment mean	*15.8*	*3.8*	*16.2*	*3.5*	*15.7*	*3.5*	*15.7*	*3.5*	2.87^{NS}
ERI ratio	*1.4*	*0.5*	*1.5*	*0.6*	*1.4*	*0.5*	*1.4*	*0.6*	F=9.07***
Maslach Burnout Inventory (MBI)									
Emotional Exhaustion (EE)									
Low	212	23.5%	52	12.6%	40	11.0%	304	18.1%	
Moderate	278	30.8%	117	28.3%	102	28.0%	497	29.6%	
High	412	45.7%	244	59.1%	222	61.0%	878	52.3%	49.1***
Mean	*25.5*	*11.7*	*28.5*	*10.3*	*29.3*	*10.2*	*27.1*	*11.0*	*19.6****
Depersonalisation (DP)									
Low	479	53.0%	145	34.9%	95	26.0%	719	42.7%	
Moderate	259	28.7%	111	26.7%	112	30.7%	482	28.6%	
High	165	18.3%	159	38.3%	158	43.3%	482	28.6%	128.1***
Mean	*7.4*	*5.7*	*10.6*	*7.0*	*11.6*	*6.7*	*9.1*	*6.5*	*73.6****

Personal Accomplishment (PA)									
Low	351	40.4%	114	28.6%	90	24.7%	555	34%	44.2***
Moderate	303	34.9%	141	35.4%	135	37%	579	35.5%	
High	215	24.7%	143	35.9%	140	38.4%	498	30.5%	
Mean	*36.1*	*7.1*	*33.9*	*7.7*	*33.3*	*7.0*	*34.9*	*7.3*	*24.03****
Burnout (EE+1)									
	232	24.4%	161	38.1%	144	38.4%	537	30.8%	38.59***

*****=p ≤ .001 [NS]=not significant**

Factors associated with burnout

Bivariate correlation showed weak to medium correlation between independent variables. When analysing factors associated with criteria for burnout, male sex, lower desire to practise, lower work-ability, higher presenteeism, higher ERI ratio and greater overcommitment were significantly associated with burnout. For consultants, male sex, lower work-ability, higher ERI ratio and overcommitment were significantly associated with burnout, while for HSTs, male sex, lower work-life balance, higher presenteeism and overcommitment were significantly associated with burnout. For BSTs, male sex, higher ERI ratio and overcommitment were significantly associated with burnout. (Table 8)

Table 8: Factors associated with burnout (Binary logistic regression)

		All		**Consultants**		**HST**		**BST**	
		Wald	***Exp(B) (95% C.I.)***	**Wald**	***Exp(B) (95% C.I.)***	**Wald**	***Exp(B) (95% C.I.)***	**Wald**	***Exp(B) (95% C.I.)***
Sex	Male	22.07***	*1.90 (1.46-2.49)*	9.19**	*1.86 (1.24-2.77)*	6.11**	*1.94 (1.15-3.27)*	6.32**	*2.02 (1.17-3.51)*
Age Group (Ref.Cat:31-40 years)		22.61***		0.15ns		5.29ns		8.71**	
	30 and under	15.29***	*1.98 (1.41-2.78)*			2.7ns	*1.71 (0.9-3.25)*	8.71**	*2.64 (1.39-5.03)*
	41-50	2.33ns	*0.73 (0.49-1.09)*	0.15ns	*0.88 (0.48-1.64)*	2.4ns	*0.32 (0.08-1.35)*	0ns	
	51 and over	0.51ns	*0.78 (0.4-1.53)*	0.08ns	*0.89 (0.38-2.08)*				
Years of practice		0.93ns	*0.98 (0.94-1.02)*	0.72ns	*1.02 (0.98-1.06)*	0.61ns	*0.95 (0.83-1.08)*	1.71ns	*0.8 (0.57-1.12)*
Work load		2.53ns	*1.01 (0.98-1)*	1.51ns	*1.01 (1-1.02)*	0ns	*1 (0.98-1.75)*	0.83ns	*1.01 (0.99-1.03)*
Desire to practise		5.13*	*1.18 (1.02-1.35)*	2.04ns	*1.17 (0.95-1.44)*	3.38ns	*1.31 (0.98-1.02)*	1.03ns	*1.15 (0.88-1.49)*
Work life balance		2.12ns	*0.9 (0.78-1.04)*	0.47ns	*0.93 (0.76-1.14)*	3.72*	*0.74 (0.54-1.01)*	0.07ns	*1.04 (0.77-1.41)*
Work-ability		10.13***	*0.89 (0.83-0.96)*	6.97**	*0.88 (0.8-0.97)*	1.62ns	*0.91 (0.79-1.05)*	1.8ns	*0.9 (0.78-1.05)*
Presenteeism		6.14*	*0.85 (0.74-0.97)*	0.71ns	*0.92 (0.77-1.11)*	8.98**	*0.66 (0.51-0.87)*	0.48ns	*0.91 (0.7-1.19)*
ERI-Ratio (ERI)		11.05***	*1.57 (1.2-2.04)*	4.43*	*1.55 (1.03-2.33)*	0.88ns	*1.25 (0.79-1.98)*	6.88**	*2.15 (1.21-3.81)*
Overcommitment (ERI)		60***	*1.19 (1.14-1.24)*	32.33***	*1.2 (1.13-1.28)*	16.78***	*1.2 (1.1-1.32)*	9.6**	*1.15 (1.05-1.26)*
Constant		36.71***	*0.02*	21.61***	*0.01*	4.03*	*0.06*	9.86**	*0.01*
Nagelkerke R Square			**29.1%**		**25.9%**		**32.4%**		**30.6%**

ERI – The Effort Reward Imbalance Questionnaire; MBI – Maslach Burnout Inventory; ns – not significant *p≤0.05; **p≤0.01; ***p≤0.001

Discussion

This national survey of hospital doctors working within a single healthcare system set out to measure levels of workplace wellbeing across grades by assessing occupational stress, burnout, presenteeism, work-life balance, work ability and desire to practise in a group already shown to have high levels of psychological distress[133].

Occupational stress was reported by four out of five respondents (79%), indicating that the perceived rewards for the group and especially for the HSTs fall well short of the effort exerted. Whilst consultants reported highest levels of effort, rewards were also highest for this group. At the time of the survey, the majority of the consultants were employed on a contract which had been in existence since 1998, with a new, less favourable, contract introduced for new recruits in 2012[179], two years before this study. It remains to be seen whether these changes affect the perceived reward in the group, as the contract did not just have an impact on pay, but also curtailed the rights to engage in private practice, thus affecting autonomy[23]. To date there are few studies reported on doctors that have used the ERI, so there is little opportunity for comparison. Thus, the present study is a novel contribution to the literature. However, one German study of surgeons found that 25.1% of respondents reported occupational stress, a stark contrast to the 81.8% in this study[178].

The levels of burnout in our population were also high, evident in nearly a third of respondents and particularly high in trainees. Over 50% of our population had high levels of emotional exhaustion, much higher than in hospital doctors from the United Kingdom, the United States (US) and Australia[79]. In our sample, burnout was significantly associated with male sex, lower desire to practise, lower work ability, higher presenteeism, higher ERI ratio and overcommitment, but not with years of experience or workload. In spite of the high prevalence of burnout and work stress, over two thirds of doctors expressed desire to continue in their medical career. However, the desire to practise was rated lower than that reported in British doctors where 81% reported a strong or very strong desire to practise medicine[171].

In our sample, trainees reported working significantly more hours than their consultant colleagues which may help to explain the higher prevalence of both occupational stress and burnout in trainees, in line with the literature[133]. However, this was not confirmed in the binary analysis in our study. While there is no firm evidence that long hours correlate with poor mental health[180], work hours were previously found to be associated with poor personal wellbeing in this population[133] indicating a possible moderating effect of personal wellbeing on occupational stress.

It is however possible that high workload contributed to reduced work-ability, which is associated with reduced job performance[181], increased risk of long term sick leave and early retirement[182]. The prevalence of insufficient work ability in our sample was seven times greater (29%) than in a Dutch study where only 4% of doctors rated their work ability as insufficient[173] suggesting that the working conditions of hospital doctors in Ireland are significantly less favourable than in the Netherlands.

Presenteeism was prevalent in over 75% of all doctors and was significantly associated with burnout, in line with a comparable Norwegian study which reported 80% prevalence of presenteeism[183]. A somewhat lower prevalence of presenteeism was reported in a study of US residents with senior residents reporting 62% and junior residents 52% prevalence[172]. The high levels of presenteeism are perhaps not surprising in an occupational group who, uniquely, in Ireland, are imbued with the responsibility to secure 'cover' for absence, even in the context of acute illness. Indeed, the US study suggests that some of the reasons for presenteeism include misplaced dedication, reluctance to let down the team and resource issues such as lack of adequate cover due to staff shortages, all of which are evident in Irish healthcare.

This is perhaps further reflected in the poor work-life balance in our sample, with only one in five (22%) having enough time for family/ personal life. Even consultants' 28% prevalence of work-life balance, which was significantly higher than trainees', compares unfavourably with a concurrent US study in which 41%-48.5% of doctors reported satisfactory work-life balance[25 168].

There has been a recent shift in the focus of research away from simply measuring burnout prevalence to determining what interventions may be effective. It is clear from recent research that while interventions focussing on the doctor as an individual can be helpful, those interventions which are focussed on the organisation are much more effective[102 103]. Indeed, the findings of this study seem to indicate the need to critically review the working conditions of hospital doctors in Ireland. Surprisingly, in a milieu where evidence is the key driver of patient treatment, the evidence on the relationship between workplace psychosocial environment and employee health is paid little attention by those who fund and manage healthcare organisations. It is buried under the constant refrain of 'putting the patient first' with little regard for those who are instrumental in providing care.

Strengths and Limitations

As previously reported[133], this study is the first national survey conducted on a cohort of hospital doctors working within the same health system in Republic of Ireland. The results can be taken as

largely representative as all but one hospital specialty (radiology) are included. The 55% response rate would be considered high in this population where response rates tend to be low and are declining. Moreover, response rates tend to be lower when questionnaires are long and deal with sensitive topics[184]. The use of single items for measuring presenteeism, work-life balance, work ability and desire to practise also allows for comparison with international studies. The use of the ERI, which posits that work effort is spent as part of a social contract, reciprocated by obtaining adequate reward, with imbalance between high effort and low reward indicating adverse work conditions, (which in some people can be exacerbated by overcommitment) make it particularly appropriate to measuring occupational stress in the healthcare sector. The use of the MBI allows for comparison of burnout with previous studies of the profession.

The observation of highly significant differences between consultants and trainees across almost all measures is a novel aspect of this study and will be helpful in guiding employers and post-graduate training bodies towards possible areas for future intervention.

On the other hand, the cross-sectional design of the study prevents us from determining the causality or directions of the observed associations. In our sample, the percentage of respondents holding Irish nationality was higher than the number of Irish graduates working in hospitals in a contemporaneous report. This may well reflect the fact that Irish nationals are more likely than their non-Irish colleagues to secure competitive consultant and training posts as we did not survey those in non- training service posts or locums[133]. Arguably, were these groups to be included, the prevalence of all negative workplace wellbeing measures might well be higher, as they deal with the same demands as their colleagues but with even less support. Nor did we survey interns, the most junior of trainee doctors in the Irish healthcare system, who have been shown to have high levels of emotional exhaustion[185].

Implications

These negative indicators of workplace wellbeing in hospital doctors are deeply troubling but unsurprising considering the timing of this study, which followed several years of cutbacks in the Irish public sector. The reported prevalence of occupational stress and burnout are likely to have contributed already to the wave of emigration amongst highly trained young doctors.

For those who have stayed at home or are entering the profession, the implications are stark. One in three is likely to experience burnout, and four out of five will suffer significant occupational stress. Low levels of work ability suggest that of those who do remain, many may well retire early or worse,

develop health problems which will force them to leave the service prematurely. This represents a significant loss for the Irish State, not only in fiscal terms, when considering the high cost of medical training. More importantly, it likely contributes to the intolerable vacancy rates at consultant level and creates increasing pressure within the system and on their multidisciplinary team colleagues with whom they provide care. Given their association with burnout in our population, it may be worth tracking these simple measures in order to identify target areas for future intervention.

Improving the quality of patient care and reducing the frequency of adverse events are justifiably garnering the attention of researchers and funders but a growing body of evidence is linking these to physician burnout. As a society, we must ask ourselves what kind of doctors we want to care for us and whether it's acceptable to continue to expect them to perform well within a system which demands so much but provides so little support. Bringing the focus to evidence-based interventions to improve working conditions will not only enhance the wellbeing of doctors but will likely have the added benefit of improving patient outcomes. It must be addressed urgently if we are serious about improving the quality of patient care.

Conclusion

Hospital doctors in Ireland have higher levels of burnout measures than their international peers, with occupational stress, work ability, presenteeism, work-life balance and desire to practise all appearing to contribute to this burnout. Their levels of occupational stress are high with effort greatly outweighing reward. They have low levels of work ability when compared with other European doctors and their work-life balance is unfavourable when compared with doctors in the US as are their levels of presenteeism. Levels of burnout and other measures of workplace wellbeing should be monitored as a quality indicator in healthcare with a view to determining whether specific interventions have had a positive impact on their prevalence.

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Data statement

As per the ethics approval, the data will not be shared outside of the participating research institutions. Any sharing of the data beyond the group will be subject to review by the host institution (Royal College of Physicians of Ireland) and to independent research ethics application. Any queries on how to access the dataset should be directed to research@rcpi.ie.

Contributors

All authors met at least one of the criteria recommended by the ICMJE and have agreed on the final version of the manuscript. BH and GW were involved in conceiving and designing the original protocol. BH wrote the first draft of the manuscript. LP, SD, GW and FD contributed to subsequent drafts and FD provided statistical advice.

Conflicts of interest

None

Ethics approval

Research Ethics Committee Royal College of Physicians of Ireland December 2013 (RCPI RECSAF 20).

Chapter 3 – Study 2

Doctor, how can we help you? A qualitative interview study to identify key interventions to target burnout in hospital doctors

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Abstract

Objective: To identify priority interventions for the prevention and reduction of work stress and burnout in hospital doctors through analysis of a) doctors' experiences of work stress and burnout and b) their preferences with respect to interventions.

Design: Qualitative design using semi-structured interviews analysed with deductive thematic analysis

Setting: Hospitals in Ireland.

Participants: 32 hospital doctors (16 practising consultants and 16 doctors in training) from a range of specialties, career stages, hospital types and locations.

Results: Practical, system-focused interventions were found to be most needed. Challenges with basic entitlements, i.e., accessing statutory leave, knowing in advance when leave can be taken and being adequately covered when on leave were identified as requiring urgent attention. Other priority interventions identified were the integration of psychological support in the everyday working environment, time and training for clinical line managers to perform key management activities such as debriefing and education interventions which highlight work stress risks and care pathways, teach self-care and train doctors in how to support one another.

Conclusions: Hospital doctors are feeling the effects of greater demand and fewer resources. What they most urgently need is adequate staffing levels, access to statutory leave and adequate cover when on leave. Doctors do not receive the support they need from their clinical line managers who lack the skills and time to excel as people managers. Organisations should focus on developing clinical

management skills across the system. The culture of medicine needs to change from stigmatisation and competitiveness to compassion and collaboration. Organisations, medical schools and professional bodies can steer this change through education.

Strengths and Limitations

- The main strength of this study is that it puts the physician's voice at the centre of the process of selecting and developing interventions to reduce physician work stress and burnout.
- The study is strengthened by the purposive sample of interviewees selected to capture experiences and preferences of individuals from a range of gender, specialty and career stage, hospital type and geographical location.
- A limitation is that the original pool of volunteers, from which the interviewees were purposively selected, may have been a self-selected group who put themselves forward for interview because of personal experiences. However, arguably these types of experiences provide most insight into opportunities for intervention. It is worth noting that 25%(n=8) of interviewees did not have a previous negative experience with work stress or burnout but came forward due to a general interest in the topic.

Introduction

Over half of practising physicians report at least one symptom of burnout and this number is growing[25] [26]. As well as diminished quality of care[30] [31], prolonged exposure to burnout can lead to depression and in some cases have devastating consequences for physicians[27]. A doctor is now twice as likely to take their own life as a member of the general population[186]. In Ireland, worsening working conditions, resulting from a preceding decade of economic austerity[187], and a growing and aging patient population[188] have been associated with work stress and burnout and are likely factors in the current high levels of doctor migration and challenges in physician recruitment[37] [106].

Work stress occurs when the demands of work exceed an individual's perceived ability to cope in Folkman & Lazarus's transactional model of stress[67]. In this model, stress is a product of the interaction between the individual and the environment and this relationship is mediated by cognitive appraisal and coping, whereby coping can be emotion-focused or problem-focused. Burnout, as described in Maslach's model, can be understood as a negative psychological outcome of prolonged work stress with emotional exhaustion and depersonalisation from patients as core features[107]. Interventions targeted at decreasing work stress and burnout can be classified as primary, secondary, or tertiary, according to their aim[114] (see Table 9). Primary interventions aim to reduce risk factors for employees. They are usually organisational interventions which tackle work environment factors perceived to contribute to work stress[115] e.g., changes to work practices, work scheduling and teambuilding.

Secondary interventions aim to enhance the ability of workers to manage stressful conditions by increasing awareness, knowledge, skills and coping resources[116] e.g., training in mindfulness and in dealing with difficult patients. Tertiary interventions aim to support recovery and minimise negative consequences in those already suffering from work stress or burnout[114], e.g., counselling, rehabilitation and return to work programmes. Tertiary level interventions are most common and primary level the least common[117] despite governmental policy recommendations that employers adopt a preventive rather than a reactive approach to the management of employee health risks[118] [189]. Combining interventions at primary, secondary and/or tertiary level is considered to have high potential value[190].

Table 9: Taxonomy of interventions for workplace stress modified, with permission, from the original table authored by Clarke and Cooper 2004

Intervention Level ***Definition and Description***	**Intervention Targets**	**Examples**
Primary ***Preventive and proactive*** **Goal*:*** reducing potential risk or altering the nature of the work stressor before workers experience stress-related symptoms or disease	Stressors at their source; organisation of work; and working conditions	Job redesign, workload reduction, reduction of workflow inefficiencies, improved communications
Secondary ***Ameliorative*** **Goal***:* to help equip workers with knowledge, skills and resources to cope with stressful conditions	Employee responses to stressors (perceived stress or strain)	Cognitive behavioural therapy, stress management training
Tertiary ***Reactive*** **Goal***:* to treat, support, compensate and rehabilitate workers with enduring stress-related symptoms and disease	Short-term and enduring adverse health effects of job	Return to work programmes, employee assistance programmes, occupational therapy, medical stress interventions

While research into prevalence, causes and consequences of burnout in doctors has dominated the literature over the past two decades, more recent calls to shift focus to intervention[120] have yielded a number of systematic reviews of interventions to prevent and reduce work stress and burnout in the past three years[102-104]. Common findings include poor design of evaluation studies and a concentration on secondary level, individual-focused interventions. Burnout levels are the most common outcome measures used in the meta-analyses, both for prevention and reduction of burnout. While most reviews found small but significant improvements in burnout levels overall, there remains a lack of clarity around which types of interventions are the most effective[102-104]. Further and better-quality intervention studies will guide selection of interventions based on efficacy. Listening to doctors

themselves, their experiences of work stress and burnout, and their proposed solutions is another valuable exercise which can inform selection of interventions and complement the growing quantitative evidence base.

The physician's voice has been the missing piece in this enquiry and without it, key factors in development and selection of interventions may be overlooked. It is well established that qualitative data has the potential to shed light on aspects relating to interventions and how they will be received which quantitative data cannot always uncover[191]. Several qualitative studies have been conducted as part of intervention evaluations[192 193] and others have investigated working conditions, stressors and coping strategies of hospital doctors[194-196]. However, this is the first qualitative study which aims to identify priority interventions for work stress and burnout by examining doctors' direct experiences of work stress and burnout and their preferences with respect to such interventions.

Methodology

Design

A qualitative, semi-structured interview design with deductive thematic analysis was used.

Participants

In a related national survey on work stress and burnout[133] of hospital doctors, an invitation was extended to participate in further qualitative research. Of those who volunteered, a purposive sample was selected, and interviews were scheduled with 16 practising consultants and 16 doctors in training. After accepting the invitation to participate, one of the scheduled interviews was cancelled by the participant due work commitments and an additional participant from that specialty was included. Data saturation was expected to be achieved with less interviews but 16 was chosen to ensure a representative mix of gender, specialty and career stage (see Table 10). An effort was also made to capture experiences of doctors in different hospital types and different geographical locations. Written, informed consent was obtained prior to interviewing, and participants were advised of their right to opt out at any stage.

Table 10: Characteristics of participants

Characteristic	Interviewees
Gender	16 Female, 16 Male
Career Stage	16 Consultants, 16 Doctors in training*
Specialty	6 Anaesthetics** 4 Psychiatry 3 Paediatrics 3 Surgery 3 Pathology 2 Emergency 2 General Internal Medicine 2 Geriatrics 1 Ophthalmology 1 Urology 1 Obstetrics & Gynaecology 1 Respiratory 1 Dermatology 1 Infectious Disease 1 Radiology
Doctors in training included basic specialist trainees (equivalent to residency in North America) and higher specialist trainees (equivalent to fellowship in North America) ****From the pool of volunteers that accepted the invitation to participate, to keep the right mix of gender and career stage (which were considered most important) and a good mix of the other criteria, we ended up with a slightly higher number of anaesthetists than other large specialities***	

Data collection

Face to face interviews were chosen due to the potentially sensitive nature of the topic. In the interviews it was necessary to encourage participants to talk openly about their experiences of stress and burnout and coping. Lazarus & Folkman's model of stress[67] and Maslach's model of burnout[107] were used to inform the design of the interview questions to draw this out. Semi-structured interview format was chosen to ensure consistency, and the guide was finalised following three pilot interviews and review of audio files by the full research team. Two main areas were explored; 1) experiences of work stress and burnout and 2) suggested interventions for the prevention and reduction of work stress and burnout. Prior to interviewing, the full research team met to identify and discuss potential biases. Every effort was made to minimise the impact of potential biases throughout the study by keeping note of and reflecting on them throughout interview, analysis and write up phases. One-off interviews were conducted by GW at a location chosen by the participants from the following options: their place of work, their home, a private meeting room at the Royal College of Physicians of Ireland (RCPI). There was no one else present. GW is an experienced, female researcher with training in qualitative methods and interviewing and was research manager at the RCPI at the time of the study.

There was no prior relationship between the interviewer and interviewees. The interviewer gave a brief personal introduction stating professional background only at the beginning of each interview. Interviews lasted 40-90mins and were audio recorded, transcribed and anonymised prior to analysis. Field notes were taken during interviews. Transcripts were not returned to interviewees for comment unless explicitly requested. Two were requested, provided and returned to researchers with minor amendments.

Analysis

Thematic analysis, as described by Braun & Clarke[146], was chosen for this study. It identifies, analyses and reports patterns or themes across a data set containing multiple cases (participant interviews). This methodology can be inductive or deductive. We used deductive analysis to identify interventions to tackle work stress and burnout and to prioritise these interventions. The deductive framework used for the analysis is as follows: Interventions were identified firstly, by analysing interviewees' experience of work stress and burnout, identifying key points along the journey from wellness to burnout which represent opportunities for intervention and transforming these opportunities into directly related, proposed interventions. Secondly, interventions were identified by capturing those proposed explicitly by interviewees. See Figure 8 for an example of analysis by both methods. Interventions identified through both methods were compiled for prioritisation and categorisation into higher level themes. Clarke and Cooper's 2004[114] taxonomy was also used to guide and organise the categorisation process.

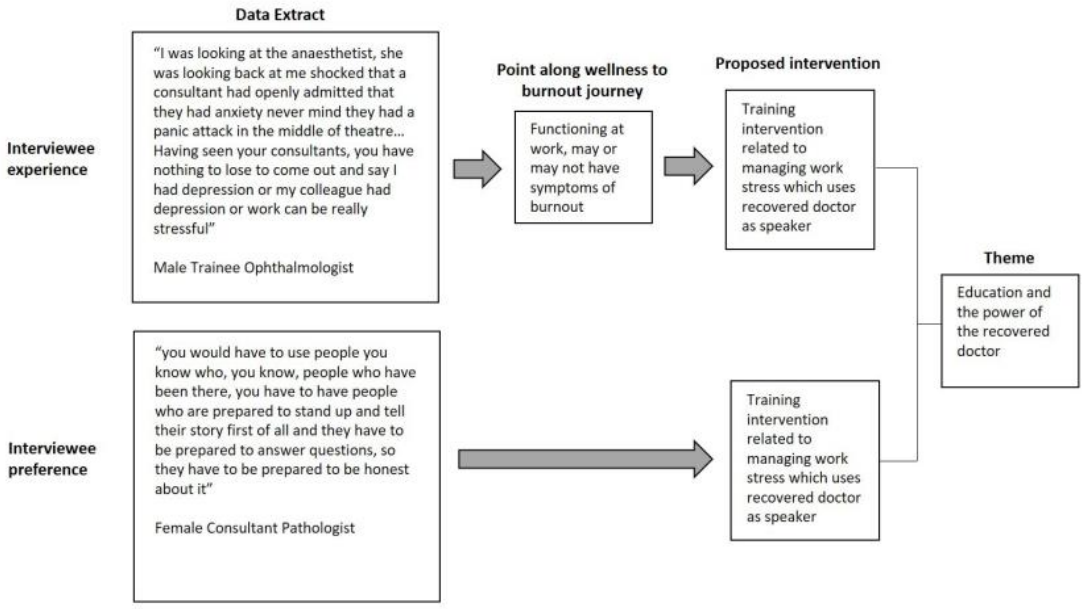


Figure 8: Example of analysis to identify potential interventions to tackle work stress and burnout using an interviewee experience and an interviewee preference

Three interviews were initially analysed, independently by GW, SM and BH. The three researchers then compared results for consensus of interpretation. All remaining interviews were analysed by GW. Once a long list of interventions and proposed higher level themes was developed by GW, a review by the full research team was conducted. At this stage many potential interventions had been identified. Priority interventions reported in this paper were determined in the same way key themes are identified in the Braun and Clarke method. According to this method, 'keyness' of a theme is determined not strictly by size e.g., amount of space within a particular interview or across the whole dataset, but rather whether it captures something important with respect to the research question and researcher judgement is necessary. When determining priority interventions in the present study, a number of factors were considered: the importance of the potential intervention as perceived by the interviewee, presence of the theme in two or more cases across the dataset and the potential impact of the intervention as perceived by the researcher. Results of the analysis include priority interventions, higher level themes and selected details of interviewees' experiences which provide rich context and insight into the value of the proposed interventions. As the focus of the study is on priority interventions, unusual cases and associated minor themes are not reported. Final findings, including representative quotations, were agreed with all researchers. A combination of manual and computer assisted (QSR NVivo10) methods was used to manage the analysis.

Ethics

Ethical approval was obtained from the ethics committee of the Royal College of Physicians of Ireland [RCPI RECSAF 20]. A €50 gift voucher was offered to all participants as an acknowledgement for their time.

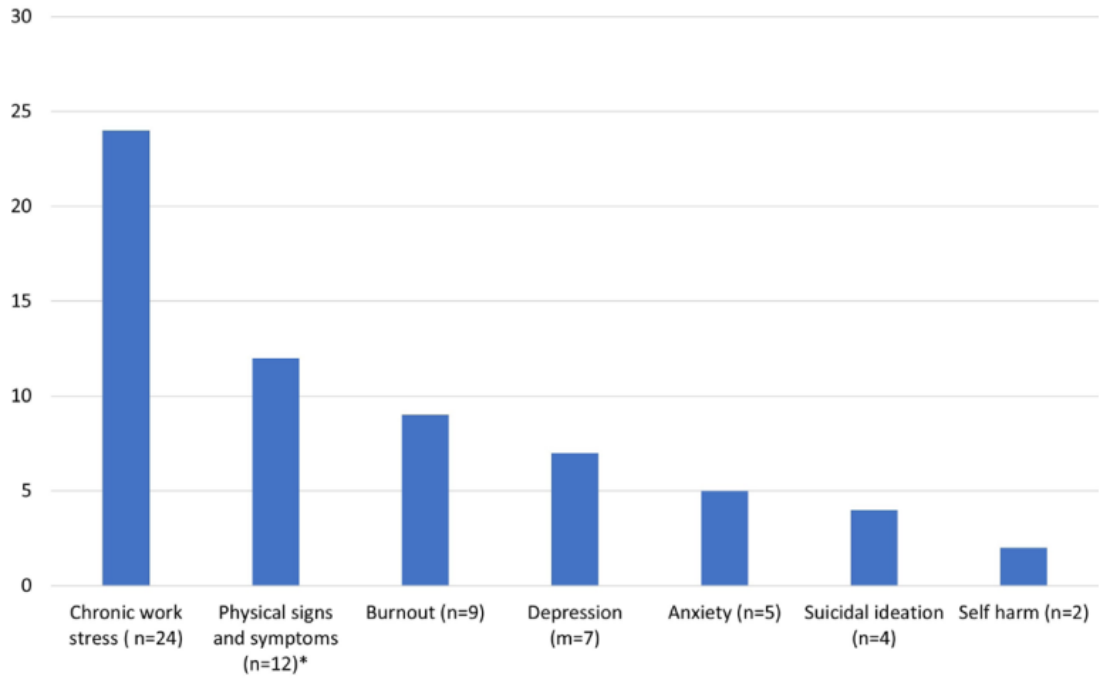
Patient and Public involvement statement

Hospital doctors constitute the patient population in this study. The study was governed by a steering group with representation from all of the participating professional bodies. Through this forum the study design was reviewed at different stages during its development by five practising hospital consultants and two hospital doctors in training. The interview topic guide was piloted with three hospital doctors (one consultant and two doctors in training) and they each provided feedback on the content, structure and experience of the interview.

Results

Work stress related ill health reported

During the interviews, interviewees were asked to describe any work stress related ill health experienced. This self-reported information (Figure 9) has been included in the results reported here to provide context and serve as background to the main findings.



Note: Some participants reported more than one symptom/condition and n=8 participants reported no ill health

*Including chest pain, fatigue, tremors, cardiac problems, inflammatory bowel disease, viral meningitis, spinal abscess, musculoskeletal pain, pneumonia

Figure 9: Work stress related ill health reported during interviews

Main Findings

These results detail the priority interventions identified through the analysis and the key themes associated with these interventions. Within the description of the key themes, details of interviewees' collective experiences which provide context and insight into the value of the proposed interventions is included. A summary of results can be found in Table 11. Primary level interventions to target fundamental issues contributing to increased work stress across the system were identified as higher priority than secondary and tertiary level interventions.

Table 11: Summary of principal findings

Intervention Level	Theme	Priority Intervention	Specific related interventions
Primary	Well resourced, well rested, adequately replaced	Review of staffing levels, cover and leave practices at hospital level to ensure allocation of statutory leave and adequate cover for all doctors	• Floating staff members • Pooled, paid, voluntary locum system • Policy for call duties during pregnancy • Review support staff levels • National review of staffing levels, cover and leave practices to identify and spread best practice
	Everyday psychological support	Integration of psychological support into the everyday	• Debriefs following difficult cases and adverse events • Psychological check ins with supervisor

		working environment of doctors	• Psychological service for self-reflection, leadership development and career planning
Secondary	Education and the power of the recovered doctor	Education intervention to highlight risks of work stress, normalise its occurrence and communicate care pathways	• Interventions to encourage and support recovered doctors to share their stories as part of formal training or informally
	Self-care, boundaries and model behaviour	Training intervention in self-care	
Tertiary	Tuning in and reaching out	Intervention to train all doctors in how to identify and support struggling colleagues	• Implementation of systems to support struggling doctors where lacking
	Effective line management for the sick doctor	Revision of responsibilities of clinical line managers to include more effective people management	• Training for line managers in how to support doctors they supervise through help-seeking, recovery and return to work

Primary Level Interventions

Well resourced, well rested and adequately replaced

Interviewees regularly described scenarios reflecting a hospital system under strain and sustained pressure to meet unmanageable demand. Staffing levels were viewed by most interviewees as unsafe for staff and patients. HR practices, which force sick doctors to secure their own cover, were described and considered inadequate and unethical. Trainees, who rotate through several hospitals throughout their training, perceived workload, staffing levels and cover arrangements to be less well managed in some hospitals and highlighted this deficit as an opportunity for improvement. The intervention identified as the highest priority was a review of staffing levels and cover arrangements locally, with the goal of facilitating for all doctors the allocation of statutory leave and ensuring full cover during statutory leave.

Further interventions identified which are related to these goals include the adoption of staffing systems which allow for slack in the system i.e., floating staff members and pooled, paid locum systems, revision of procedures for applying for leave and securing cover to more clearly delineate the role of HR, implementation of a standard policy around call duties during pregnancy and an increase in non-clinical support staff numbers. A national review of staffing levels and practices around cover arrangements across hospitals was identified as a beneficial, parallel initiative.

"The system needs to build in spare capacity within existing resources to cover what are normal HR administrative practices, people go on maternity leave, people have sick leave, people have annual leave, people have CME leave" Female Consultant Psychiatrist

“The only way the stigma is going to be removed is if the workload of the sick individual doesn’t have to be immediately transferred onto the well colleague.” Male Consultant Geriatrician

“Knowing when your leave is going to be, being able to take your leave reasonably when you want it, that is very important” Female Consultant Geriatrician

“from a trainee perspective the one thing that would make a difference is if there was a policy … you are six months pregnant ….you shouldn’t be working twenty four hours in a row when about three o clock in the morning… you are ready like to pass out and it’s all too serious… none of these discussions that you have to have with the rota maker…that’s nonsense.” Female Trainee Anaesthetist

Everyday psychological support

Although most interviewees highlighted the benefits of venting and sharing day to day problems and clinical cases with colleagues, a distinct lack of psychological support for difficult cases and adverse events as well as more everyday challenges was described. The analysis identified three potential interventions to meet this need. Firstly, the introduction of regular debriefing, particularly following difficult cases, adverse events and psychological support for associated legal processes was identified. Debriefs for everyday challenges and difficult cases should be conducted by a senior team member and cover psychological impact as well as clinical learning points. Doctors who supervise other doctors should be trained in debriefing. Conducting debriefs following adverse events and during associated legal processes may require a specialised skillset and an appointed person within a department who has undergone the relevant training or a colleague who has been through the process themselves would be required.

“I would work with 30 different consultants and at the end of the day maybe 10% of them would turn around and have a debrief of the day…. you go over the things that went well, the things that we can improve on… that is your take home message…if that wasn’t done you would think about all the negative things” Female Trainee Emergency

“I know for a fact no way would any of the medical staff have any support in that regard[psychological] either, and they are just expected to just work through it and just deal with death after death without any supports.” Male Consultant Emergency

Secondly, regular psychological check-ins by a supervisor or clinical line manager as part of standard work supervision practice was identified as a key intervention to meet this need. The third intervention identified was an onsite, psychological service geared to aid self-reflection, leadership development and career planning (particularly at career transitions and life pressure points), as distinct from a treatment service.

Secondary Level Interventions

Interventions designed to move hospital culture away from the potentially harmful practices of presenteeism and overcommitment towards a more compassionate culture which emphasises self-care, tolerance and support, were identified as the priority interventions at a secondary level.

Education and the power of the recovered doctor

Interviewees described a culture in which performance is valued above wellness, in which doctors who struggle to cope are perceived as weak and in which doctors continue to work when physically and mentally ill. Interviewees' stories indicate that this culture, while never formally endorsed, begins in the performance-focused, competitive environment of medical school and is reinforced by senior doctors and group dynamics in clinical practice. Health promotion interventions which educate doctors, at all career stages, on the likelihood and risks of work stress and burnout, normalise their occurrence and provide information on pathways to care, were identified as priority interventions. Encouraging and supporting recovered doctors to speak out publicly as part of educational programmes and informally among their peer group, was identified as potentially highly effective in breaking the culture of stigma.

"This isn't something specific to a small group of people who just can't hack it. This is something that is likely to be a challenge for most doctors at some stage in their career… it's seen as a problem of the doctor rather than a kind of sensible reaction to a non-sensible situation… why don't we talk about that?" Female Consultant Psychiatrist

"He said he would get awful panic attacks… 'I used to get sweaty and feel like I was having a heart attack, I would have to leave the room, take off my gown and go for a walk in the cold.' He was near retirement. I said 'I had never heard of a consultant having a panic attack' and he said 'yes because no one would say it'….and I was looking at the anaesthetist, she was looking back at me shocked that a consultant had openly admitted that they had any anxiety never mind that they had a panic attack in the middle of theatre…I thought 'oh my god this is a revelation'" Male Trainee Ophthalmologist

Self-care, boundaries and model behaviour

Many doctors described a level of dedication to work which leaves little room for other aspects of life and may amount to overcommitment. A self-care training intervention including practical advice on prioritising and taking responsibility for your own health was identified as a priority secondary level intervention. Key elements of a self-care training intervention should include establishing and maintaining boundaries between work and personal life, cultivating interests outside of work, and some form of spirituality or meditative practice. Such an intervention should position self-care skills

as of equal importance to clinical skills and encourage doctors to role model healthy work habits to their colleagues, particularly doctors in training. A preference for self-care interventions over resilience building interventions was explicitly emphasised.

"There is quite a dependency, almost, on work, that work becomes the dependency. My identity and my work would be very, very closely entwined. And if you asked me my identity outside the workplace, it would be less developed." Male Consultant Paediatrician

"You need to organise your life so that you are not so stressed...endless sympathy is almost like enabling… you can't take on all this stuff, you have to say no." Female Consultant Physician

"We all bear personal responsibility and now as a consultant… I have a responsibility to the people that I work with to try and model more appropriate behaviour" Female Consultant Psychiatrist

Tertiary Level Interventions

Priority tertiary interventions identified highlight opportunity and willingness among doctors to aid the recovery of sick colleagues with the help of essential procedures and training in how to support one another.

Tuning in and reaching out

Some interviewees described a lack of self-awareness in themselves and in some of their colleagues regarding the impact of work stress and burnout on their health and cited this as a reason they would not seek help. Other reasons included fear of professional consequences, feeling too busy and fear of being perceived as weak. Many described continuing to work to the point where their health problems became very advanced and serious.

Feeling tuned out, too busy or just surviving themselves, some interviewees felt they also wouldn't notice if a colleague was having difficulties. Reflecting on times when they did notice and could have reached out to a struggling colleague, a small number of interviewees described acting confidently. Most interviewees, however, reported a lack of awareness of procedures, a lack of confidence in this area or a reluctance to help based on self-preservation. To counter this delayed help-seeking behaviour and improve colleague to colleague level support, an intervention designed to train doctors, particularly those in supervisory roles, in how to identify and support struggling colleagues was identified as potentially high value. This intervention would necessitate the development and implementation of procedures where lacking.

"I have certainly seen it [work stress and burnout] in other people you know, and at a personal level, I have tried to speak to them, and I have tried to support them but there is no infrastructure" Female Consultant Pathologist

"You acknowledge that somebody else has a problem, then you end up defacto taking over their workload… I certainly can't do it for the number of people who I think have problems at the moment." Female Consultant Physician

"It should be made mandatory that the trainers should have some kind of briefing… to look out for or recognise trainees in distress" Male Trainee Obstetrics & Gynaecology

Effective line management for the sick doctor

A need to be supported by the hospital throughout the recovery process was described, along with a need for line manager and occupational health to be aligned and for occupational health recommendations to be adhered to. Following recovery, though expressing a clear preference for a phased return to work, most participants in the study described experiences of returning to work back at full commitment or with a planned phased reintroduction which was not fully observed and with no follow up. In cases where follow up meetings were held the emphasis was often on increasing workload rather than facilitating continued recovery.

Interviewees' stories of help-seeking, recovery and return to work highlighted a management void for doctors, which leaves a considerable gap in what would be normal support structures for other employees. A review of the skill requirements of clinician line managers which would incorporate line management skills is needed. In relation to the specific needs of the sick doctor, a training intervention to educate supervising doctors on how to support sick doctors through the process of seeking help and rehabilitation was identified as a priority, tertiary level intervention.

"For the first three months I was off, I was bringing in weekly certificates even though I was virtually bed bound by then and it took me five months to access my line manager, find out who it was, he hadn't been trained in what was required of him, I wasn't referred to occupational health, I had to refer myself." Female Consultant

"When I was sick, there was no definitive way to get me back to the workforce in a sustainable fashion. It was all about 'get back to work, you know, you can work ten hours, you know, push, push, we will leave you on your own'" Male Consultant Emergency

"We both had to make up all of the calls we had missed during our two months off. So, then we were punished… if you can't have one of the most stressful life events and take a bit of time off if you have

depression, what can you actually take time off for without being penalised?" Male Trainee Ophthalmologist

Discussion

This study set out to identify priority interventions to prevent and reduce work stress and burnout in hospital doctors and found that practical, system-focused interventions are of greatest need. Reflecting a system under strain, challenges with basic entitlements, which most workers take for granted, such as accessing statutory leave, knowing in advance when leave can be taken and being adequately covered when on leave, were identified as requiring urgent attention. Other priority interventions identified were a broadening of the support function provided by clinical line managers to their staff, debriefs following difficult cases and adverse events, positive cultural change within the medical community and genuine support for self-care in the workplace particularly at career transitions and life pressure points.

The preference of doctors in this study for primary level, system-focussed interventions over secondary level, individual-focused training interventions is in line with preferences of doctors in Ireland uncovered in a recent study[197]. It has also been shown that physicians expected to deal with their burnout individually feel less "resilient" and take more personal ownership of their burnout, than physicians who receive support from their hospital through system level changes[198 199]. However, to date, interventions tested and published in the literature have been predominantly individual focused[102 120]. Which type of intervention is most effective is unclear. One recent systematic review of interventions for the prevention and reduction of burnout[102] found similar improvements with both individual and system level interventions. Another similar review[103] found greater benefits following system level interventions. An earlier systematic review of interventions to prevent burnout from 2010 found that a combination of individual and system level interventions had longer lasting positive effects than either individual or system level interventions alone[200]. All reviews called for more system level interventions to be tested. Our study supports the predominant recommendation in the literature to focus on system level interventions and has identified key opportunities for intervention at primary (system), secondary (individual) and tertiary (both) level which can be implemented in a combined approach.

The overwhelming emphasis on issues of staffing, cover and leave in our study is in line with other studies and not surprising given the current doctor shortage and growing patient population in Ireland[23 197]. The shortage of doctors is a global phenomenon predicted to reach crisis levels by 2030[201]. Burnout has been associated with increased physician attrition[202] and as more burnt out physicians reduce their hours, migrate and seek early retirement, those who stay are left under greater strain. However, while staff shortages are a problem for all hospitals, our study identified better

staffing and leave practices in some hospitals over others, resulting in less stress for doctors in training who rotate through those hospitals. This suggests that the current situation in some hospitals could be improved through optimisation of existing management and human resources practices. This finding adds further nuance to a related finding in a 2016 study of key stressors for hospital doctors in Ireland where the top three stressors for consultants were related to a lack of long-term planning, quick fix management decisions with respect to resourcing among other things and staff shortages[187].

Along with adequate staffing, good leadership and support from line manager have been found to reduce the risk of burnout[203-205]. The identification of lack of adequate support from line managers as a key opportunity for intervention in our study is telling the same story. Doctors in supervisory roles are not adequately trained and do not have enough time to fulfil the people management functions of a line management role[206]. Doctors all over the world are trained with an extreme emphasis on technical skills to treat patients with little time apportioned to learning the skills needed to be effective leaders or supportive managers[15]. Yet this support can make a vital difference to a doctor experiencing burnout. A Dutch study into help seeking behaviours of human service professionals identified the key, gate-keeping role of supervisors in the process of help-seeking and recovery[207]. This ties in with our findings which highlight the need for doctors in the supervision of others to be able to identify struggling colleagues and support them through help-seeking, recovery and follow up. Inadequate staffing and gaps in line management for doctors are both organisational factors which should be tackled through targeted interventions.

In addition to inadequate support from line management, cultural characteristics of the medical profession such as an emphasis on performance, competitiveness, perfectionism and presenteeism have been cited as triggers for mental ill health in doctors[208]. A number of priority interventions identified in this study relate one way or another to the culture of medicine. A need and a willingness to move away from a culture of stigmatisation to one of support, from a culture of presenteeism and endless resilience to one of self-care and from propagation of the hidden curriculum[209 210] to the role-modelling of healthy work habits, were identified. While it has been argued that this kind of cultural change can only be achieved by a gradual, bottom-up approach that does not threaten existing, deeply embedded professional identities[211], our study identified training interventions throughout the medical career as potentially valuable, particularly if recovered doctors are involved as facilitators. Finally, training is not the only way to bring about this cultural change. Physicians at an individual level can help by taking personal responsibility for their own health. Higher levels of reported self-care have been to be linked to lower levels of emotional exhaustion in doctors[212] and the related concept of self-efficacy, defined as the belief we have in our own abilities[213], has also been shown to be negatively

related to burnout[214]. Many aspects of medical education are now believed to occur through role-modelling[209 215 216]. Senior doctors can further drive the necessary cultural change by being aware of the impact of their behaviour on junior colleagues and using this influence to model healthy and supportive work habits. The contributions on this subject of senior doctors interviewed in our study suggest that this, though challenging, is not impossible.

The main strength of this study is that it puts the physician's voice at the centre of the process of selecting and developing interventions to reduce physician work stress and burnout. The study is further strengthened by the purposive sample of interviewees selected to capture experiences and preferences of individuals from a range of gender, specialty and career stage, hospital type and geographical location. A limitation is that the original pool of volunteers, from which the interviewees were purposively selected, may have been a self-selected group who put themselves forward for interview because of negative personal experiences with work stress and burnout. However, arguably these types of experiences provide most insight into opportunities for intervention. It is also worth noting that 25%(n=8) of interviewees did not have a previous negative experience with work stress or burnout but came forward due to a general interest in the topic, which is also interesting and may signify a positive shift in attitude. Another potential limitation is that this study did not include non-consultant hospital doctors outside of training programmes and doctors in general practice. Both groups are at risk of work stress and burnout and should be included in future research.

Credibility of the study is also strengthened by the different perspectives represented by the research group[217], which consists of an occupational health physician and three experienced researchers (all females) with diverse relevant expertise from the fields of human resources, organisational psychology, health psychology, human performance, health services and medical education. The interviewer, GW's specific experience is in health services, health psychology and medical education research.

Conclusion and Key recommendations

Hospital doctors are feeling the effects of greater demand and fewer resources. What they most urgently need is adequate staffing levels, access to statutory leave and adequate cover when on leave. It is a recommendation of this study that healthcare organisations not only intensify their focus on recruitment and retention but also review and optimise current practices around cover and leave as the highest priority. Doctors do not receive the support they need from their clinical line managers who due to intensive clinical skills training may lack the skills and time to excel as people managers. To rectify this, healthcare organisations, medical schools and post-graduate training bodies need to focus on providing doctors who supervise others with the time and training to perform key management activities such as debriefs and identifying and supporting sick team members. The

culture of medicine needs to change from stigmatisation and competitiveness to one of compassion and collaboration. It is incumbent on healthcare organisations, medical schools and professional bodies to steer this change through education and to engage recovered doctors, willing to share their powerful stories, as facilitators. Individual doctors can help further by acknowledging the influence they have on their junior colleagues and peers and using this influence to model compassion, self-care and healthy work habits. Researchers can contribute by comparing efficacy of interventions more rigorously and placing an emphasis on testing primary, system-level interventions and combined intervention approaches.

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Results of this study will be emailed to directly participants. Other interested readers will be directed to the publication once it is published through established Royal College of Physicians and HSE library communications channels following publication.

Data sharing statement

As per the ethics approval, the data will not be shared outside of the research team. Any sharing of the data beyond the group will be subject to independent research ethics application.

Contributors

All authors were involved in design of the study, design of the topic guide and review of pilot interviews. GW conducted all the interviews and the bulk of the analysis. SM and BH three interviews. All authors were involved in finalising analysis. GW wrote the first draft of the manuscript. SM, YF and BH contributed to subsequent drafts.

Competing interests

None

Chapter 4 – Study 3

'I would have blamed myself, but coming back, I can see that it wasn't me' - A qualitative, Descriptive Phenomenological Analysis (DPA) of doctors' reflective processes in recovery from burnout and mental crisis

Introduction

Over half of practising physicians experience work-related mental illness or symptoms of burnout [79]. A doctor is more likely to take their own life than a member of the general public [92] and work-related stressors are more frequently associated with physician than non-physician suicide [218]. There is a shortage of doctors globally, and even high-resource countries, such as Ireland, are struggling to recruit and retain doctors [219]. These shortages may be related to working conditions, which are perceived by some doctors to be poor [37] and associated mental illness [220].

In tackling the problem of physician burnout and work-related mental illness, the focus has been on prevention, and this has, justifiably, driven research, predominantly, on prevalence and antecedents of burnout [79 221] and prevention [102-104]. While prevention should remain the goal, the elimination of work-related mental illness in hospital doctors, at least in the short term, is unrealistic. Therefore, supporting doctors' recovery is also important. The aftermath of work-related mental illness and burnout, including the recovery and return-to-work phase, however, is not well understood [126 222].

With respect to recovery and return-to-work, cognitive behavioural therapy has been shown to be efficacious in the reduction of emotional exhaustion though not necessarily return-to-work [126]. Interventions which combine an organisational component, such as modifications to the working environment, with treatment, show promise [104]. Allowing time for recovery from fatigue also predicts return-to-work following burnout [127 128] and a natural recovery process which occurs over time, but is not attributable to any specific therapy, has been identified in some people [126]. Qualitative examination of doctors' subjective experiences of burnout is lacking and can provide insight into these recovery processes that quantitative methods cannot achieve [130].

Qualitative research on burnout and work-related illness in doctors has also been focused on antecedents and protective factors with little exploration of physician's experiences of burnout and no studies of the aftermath [108]. We identified one phenomenological, qualitative study which included the recovery phase of burnout and work-related mental illness as experienced by doctors [132]. In their study of hospital doctors in training, Abedini et al. provide deeper insight into aspects of the recovery

experience upon which our study aims to build. They found that recovery from burnout, caused by environmental triggers, arose through resolving workplace challenges, nurturing personal lives, and taking time off. Recovery from burnout caused by a loss of meaning in medicine, was achieved by the doctors' recognition that burnout had occurred; connecting with patients and colleagues; rediscovering or finding new meaning in medicine; and redefining professional identity. Many trainees in Abedini's study attributed recovery to reframing unrealistic expectations they had of themselves to perform to their internalised ideal of the 'good doctor' and learning how to set boundaries with patients.

There are few phenomenological studies of the recovery or aftermath of burnout, none which look in depth at the role of reflection within recovery and none in established senior consultant doctors. We propose that doctors, senior hospital consultants in particular, with no history of mental health illness are a unique group that warrant specific attention for a number of reasons. Historically, doctors operated as autonomous caregivers, who visited patients in their homes. The hospital institution as we know it today, which cares for an entire population, only evolved in the early 20th century. The hospital doctor now practises within a complex organisational setting, but training and management structures inherited from the historical 'autonomous expert' model do not prepare doctors to thrive in such a setting. This is evidenced by a general disengagement of doctors in work involving organisational or hospital management activities, such as cost-containment [17] in favour of clinical work, and a lack of traditional line management support for doctors especially senior consultant doctors [18]. Higher portions of doctors display personal traits shown to make individuals more susceptible to burnout, such as perfectionism, a strong sense of responsibility, and a tendency to overcommit [15 223]. Doctors have higher levels of presenteeism than other professionals [224]. Consultant hospital doctors are a particularly resilient group [137] with ultimate responsibility for patients and accountability for the work of their teams. For these reasons we propose mid to late career consultants with no history of mental illness are likely to experience a work-related burnout as a major, negative life event with far reaching, psychological impact in a unique way and that studying this cohort and context is important.

The aim of the current study is to provide an in-depth, descriptive, phenomenological analysis of the reflective processes used by senior hospital doctors, in recovery from burnout or mental health crisis perceived to be caused or exacerbated by work stress. We aim to expand on extant phenomenological work on factors relating to recovery from burnout and provide a clearer understanding of the reflective processes that are important in this context.

Methodology

In this research, the life situation of recovering from and coming to terms with a mental illness perceived to be caused, or exacerbated by work stress, as a senior consultant hospital doctor, was studied. Accounts of experience were gathered through in-depth interviews. On preliminary analysis of the data, the psychological phenomenon of reflection emerged as a key component of the experience. Giorgi Amadeo's descriptive phenomenological analysis (DPA) methodology [131] was applied to the data to examine and describe, in-depth, the phenomenon of reflection in this life situation. A secondary, deductive content analysis was conducted to provide participant-specific information relevant to the phenomenon such as the illness and help seeking experiences of participants and the context within which their experience occurred.

Giorgi's DPA method is anchored in the phenomenology of Husserl and Merleau-Ponty [152], and is designed to elicit and describe the essential structure of a psychological phenomenon. Giorgi's methodology is typically used to study a predefined phenomenon; however, it is also used for the analysis of phenomena which are present within a dataset as long as 'good' or 'adequate' descriptions of the phenomenon are present [131 225]. Good descriptions of the phenomenon are described by Giorgi as those that allow for a rich analysis of an experience or phenomenon and adequate descriptions are described as those that can yield a structure of the phenomenon from a psychological perspective [226 227]. This dataset was replete with data describing first-hand experience of the phenomenon of reflection in this life situation more than adequate to support a DPA analysis. According to phenomenological methods, the phenomenological analysis was conducted inductively, and no theoretical or interpretive framework was applied [228].

During the phenomenological analysis of the data, two distinctive forms of reflection emerged in the collected accounts of experience, and data were sufficiently rich to use the DPA methodology to determine an essential structure of both forms of reflection separately.

Participants and Recruitment

A sample of 20 consultant doctors was purposefully selected, to include a mix of genders, specialties, hospital locations and sizes, from 53 doctors who volunteered to participate in qualitative research following completion of a survey on wellbeing (study 1). From the 16 interviewed (4 dropouts due to work commitments), six were selected for analysis based on inclusion criteria: burnout and/or mental illness experienced, burnout and/or mental illness perceived to be caused or exacerbated by work stress and professional help availed of.

Data Collection

Participants were interviewed in person about their experiences of work stress, mental illness, burnout, help-seeking and recovery according to phenomenological interview guidelines[131]. These guidelines include asking open, discovery-oriented questions; establishing rapport; being psychologically sensitive to the interviewee; directing the participant back to the experience of interest but not 'leading the participant' towards anything specific and keeping the participant focused on what was actually lived through. The advantages of face-to-face interviews in generating in depth accounts of life situations have been described by many phenomenological methodologists including Giorgi [131 228 229]. Following three pilot interviews the full research team met to review the interview process and ensure adherence to the phenomenological interview guidelines. Interviews were conducted by the first author. Interview transcripts were returned to interviewees for comment if requested. Two were requested, provided, and returned to researchers with minor amendments. Written, informed consent was obtained. Participants were advised of their right to opt out at any stage. Ethical approval was obtained from the RCPI ethics committee.

Analysis

The transformation from raw data to the essence of the phenomenon was performed according to Giorgi's DPA methodology [131], see Table 12. Prior to analysis, researchers assumed the attitude of phenomenological reduction sitting with participant experience in an empathic way [230]. Researchers engaged in 'phenomenological epoché' or 'bracketing' prior to analysis and data collection. Bracketing is the active setting aside, by the researchers, of existing assumptions and theoretical, or meaning-giving, structures, such as personal values, related to the phenomenon [155 231]. This step was largely an internal process for each researcher but was aided by discussions on two occasions where researchers met to identify, discuss and set aside pre-existing personal assumptions.

A shift in attitude that was sensitive to the phenomenon under study was then assumed to enable the researchers to tune into and distil the essential components of the phenomenon. Finally, as this method seeks to identify the psychological essence of the phenomenon, the researchers adopted a general, psychological attitude toward the data [131]. The entire written accounts were then read for a sense of the whole before analysing each account individually. The text was delineated into meaning units which were transformed from everyday expressions into psychologically expressed statements, explicit to the phenomenon through the process of free imaginative variation [131]. Using the process of free imaginative variation, the researchers continuously varied the content of the new transformation until it was as close to the essence of the participants words as possible with no meaning omitted and none added but psychological in nature and tuned into the phenomenon of interest [131 154 227]. Examples

of the process of free imaginative variation from our analysis are provided in Table 13. Following this, the researchers synthesised a general, essential, psychological structure of the phenomena as experienced in this context which included an essential description of constituents of the phenomenon and the relationship between constituents.

Table 12: Giorgi's descriptive phenomenological analysis method [131]

Step	Description
1. The phenomenological attitude was assumed	● In this step, researchers accepted that the individual being interviewed genuinely experienced the given phenomenon, taking their accounts at face value ● Researchers, as faithfully as possible, set aside or 'bracketed' past knowledge of the phenomenon, biases, theoretical or meaning giving structures such as personal values and religious beliefs in order to assume an attitude of openness ● Researchers adopted a psychological attitude towards the data. What is advocated here is a general psychological attitude and not any specific theoretical perspective such as psychoanalytical, cognitive, Gestalt etc. ● Finally, researchers adopted a special sensitivity toward the phenomenon under investigation
2. The entire written account (one interview at a time) was read to get a sense of the whole	● In this step researchers simply read the full transcript of one interview to get an overall sense of the full experience
3. The transcript was divided into meaning units	● In this step the data were separated into smaller, more manageable portions, called meaning units for analysis. Meaning units were selected to be large enough to have explorable significance and small enough to be manageable and marked out shifts in meaning within the data
4. Meaning units were transformed into psychologically sensitive statements explicit to the experience of coming to terms with a mental health crisis	● In this step meaning units were transformed from everyday expressions into psychologically expressed statements which were explicit to the phenomenon under study through the process of free imaginative variation ● Free imaginative variation in this step means, that in the process of coming up with a psychologically sensitive transformation of a meaning unit, the researchers continuously varied the content of the new transformed statement until it was as close to the essence of participants data as possible with no meaning relevant to the phenomenon under study omitted and none added.
5. A general psychological structure of the experience was synthesised based on essential constituent elements of the experience	● In this step, transformed meaning units with similar meaning were grouped together. These groups of meaning units were synthesised into representative descriptions of their common and essential meaning. Free imaginative variation was used again to ensure nothing essential was omitted and nothing which was not representative was added. ● These descriptions were then combined into an overall description of the phenomenon using free imaginative variation to ensure only meaning which was truly essential to the phenomenon was included. ● These essential elements of meaning (known as constituents) and how they relate together are carefully captured within the structure. ● The transformation to meaning units is determined by examining parts of the description; the structure must be mindful of the whole. Consequently, the description of structure itself can end up quite different from the way the meaning units read. It is not a matter of simply listing elements but of bringing a holistic perspective to them and imaginatively trying to identify what is key as well as trying to remove key elements in order to see if the phenomenon stands or collapses.

Table 13: Example of phenomenological transformation of raw data using free imaginative variation

Relevant information	Data Extract	DPA transformation 1	DPA transformation 2	Constituent (s)
The following interviewee had described an extended period of unsustainable, 'unsafe', overwork for their department prior to their burnout and repeated, unsuccessful attempts to secure resources through management which would return their department to an adequate level of staff.	*P1: 'I said, I have to look after myself and I have to be forthright, and this is what I have to do. So, I withdrew some aspects of the clinical services, patients were affected, and I had enormous difficulty with management, and they were actually onto me saying when was I going to start this back.'*	P1 was convinced at the time that he had to take significant steps to protect himself and his health and that he had to do it in a strong and determined way. He highlights the seriousness of the steps he took, noting that he cancelled some of the services he provides which had a negative knock-on effect for patients. This caused enormous difficulty with management who continued to press him to return to the previous work volumes and services	P1 took strong and determined action to protect himself from overwork and ill mental health by withdrawing himself from a portion of his work, cancelling some services. He is aware that his actions to protect himself were bold and affected some patient's care, but he felt that he needed to take these steps for the sake of his own health. Taking this action caused great difficulty and conflict with management who did not readily accept P's action and continued to request that he return to previous workload levels.	Rearranging priorities – doctors rearranged their priorities for the first time, placing themselves, their health and their personal relationships above their work Self-protection and establishing boundaries – doctors began to practice self-protection and establish clear boundaries at work
The following interviewee suffered a burnout and subsequent marriage breakdown.	*P2: 'You shouldn't bring negative energy from the workplace into those relationships, and I probably brought, even though I wouldn't be verbal with [my spouse] they could probably see that I was burned out, exhausted not in a great place and I was probably bring negativity from excessive work load pressure home which I shouldn't have done.'*	P2 realises that they were bringing negative energy from their work into their relationship which put further pressure on the relationship. So not only were they spending excessive time at work instead of in their relationship they were bringing negative energy from work into their relationship and were exhausted when they was outside of work, using their time outside of work to rest and recover enough to be able to go back into work as opposed to using their time and energy outside of work to nurture their relationship.	Reflecting on their marriage breakdown, P2 realises they were bringing negative energy from their work into their relationship. They believe their spouse was aware that they were burntout. They admit that their excessive workload pressure was causing them to offload negative energy in their relationship and they believe that it was wrong of them to do this, and that it is wrong to do this in general to one's personal relationships in life.	Self-reflection in the context of the experience – participants demonstrated an awareness of themselves and how they acted within the experience Self-reflection on a broader scale – their experiences led doctors to reflect on themselves and how they live their lives in a deeper way, beyond the specifics of the experience

Our findings are presented in two parts: results of the DPA on reflection and results of the secondary, deductive content analysis on participant-specific information relevant to the phenomenon.

Description of the Sample

Two of the six interviewees were female. Interviewees' career stage was mid to late consultant level (approximate age 45 – 65 years). Specialities represented in the sample include four acute, front-line specialties and two diagnostic hospital specialties.

Results of the Descriptive Phenomenological Analysis

In the analysis it was identified that doctors engaged in two different types of reflection to come to terms with their experience. The first is a process of reflection, which helps individuals to understand and make sense of their experience. We refer to this process as 'situational sense-making'. The second is a deeper process of reflection and contextualisation of the experience that is accompanied by transformative change in the lives of participants. We refer to this process as 'transformative self-reflection'. Using the methodological steps of the DPA, it was possible to define a fundamental structure for the phenomenon of situational sense-making and a fundamental structure for the phenomenon of transformative self-reflection. Each structure is built on essential themes, known in Giorgi's method as key constituents. For clarity, we first present a brief overview of the distinction between situational sense-making and transformative self-reflection as determined by our analysis. This is followed by the fundamental structure of each phenomenon and key constituents of each structure.

Situational Sense-making vs Transformative Self-reflection

Situational sense-making is concerned with working through and making sense of specific events. In the process of transformative self-reflection, individuals reflect in a deeper way, on themselves, their lives, their history and the experience, and this deeper reflection leads to change (see Figure 10 for a schematic representation of the two phenomena and how they differ). The data suggest this distinction. However, it is important to note that the processes are closely linked and a clear boundary between where situational sense-making ends, and transformative self-reflection begins does not exist. Although it is likely that some situational sense-making occurs first, as events unfold and individuals begin to process what is happening, there is no linear relationship in time between

situational sense-making and transformative self-reflection. Individuals can engage in both in parallel and iteratively. Both types of reflection occurred during all stages of the experience from mental health crisis, through help-seeking, recovery and long after. It is not possible, from our data, to say definitively that situational sense-making did not lead to some transformation in the lives of study participants, it likely did. However, in our dataset, those who engaged in deeper reflection experienced greater transformation in their lives.

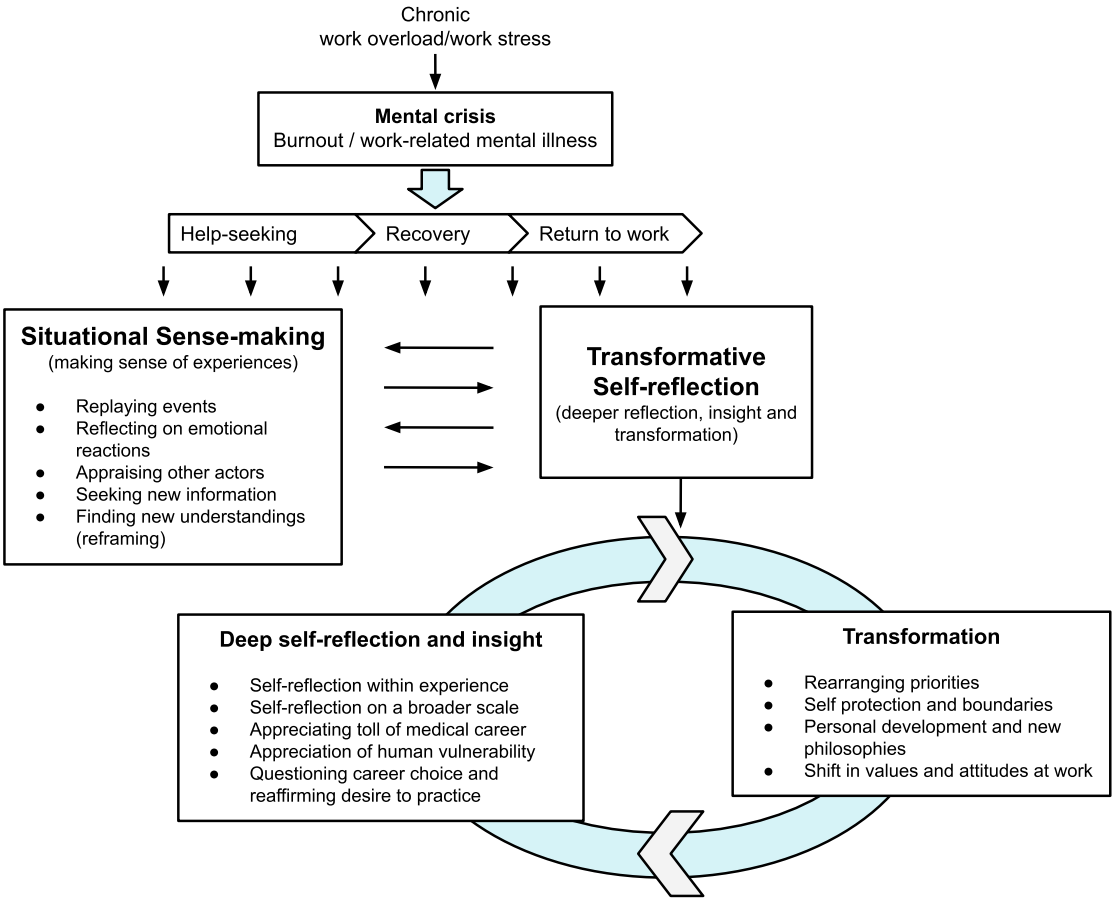

Figure 10: Schematic overview of processes of situational sense-making and transformative self-reflection which occur for a senior hospital doctor in response to a mental health crisis perceived to be caused or exacerbated by work stress.

Situational Sense-making

Structure of the Phenomenon of Situational Sense-making

> ***In trying to understand and come to terms with their experiences of mental illness and associated help-seeking in the context of intense work stress, senior doctors engaged in a process of situational sense-making in which they reflected on their experiences and sorted through them. They replayed events in their minds and revisited details of the experience. They recalled the emotional states aroused by the experience, both at the time of the experience and on reflection. In recounting their experiences, their most vivid descriptions were of memories relating to difficult parts of the experience.***
>
> ***They reflected on specific other actors within the experience, the role these individuals played and whether they had a positive or negative impact within the experience. To help them work through their experiences, they sought out new information, evidence, or outside opinion and, through the process of situational sense-making, they found new or different understandings of their experiences than they had at the time the events occurred, reframing, and reorganising them. In this way, they attempted to find an understanding of events that made sense to them.***

The process of situational sense-making was conducted in part simply as study participants **replayed events in their mind**, going over details, processing and trying to understand what had happened. Participants also **reflected on emotional states** induced by their experiences when coming to terms with events i.e. how different parts of the experience made them feel. Doctors **identified other key actors** within their experiences and appraised the role they played. Administrative managers were the most referenced and perceived to have been conflict oriented. Primary care physicians were identified as having a positive impact on help-seeking and, in two cases, participants developed strong personal relationships with their primary care physicians. In these cases, primary care physicians played a significant role in recovery. In trying to make sense of their experiences, participants **sought out new information** such as standard evidence and the opinions of trusted others, e.g. colleagues, family,

health professionals. Through the process of situational sense-making, with the addition of new information and, as their experiences evolved, study participants **reorganised or reframed their understandings** of their experiences.

Constituents of Situational Sense-making

The key constituents of the phenomenon of situational sense-making are presented in Table 14.

Table 14: Key constituents of situational sense-making

Key Constituent	Constituent Description	Participant Quote
Replaying events	Participants replayed events in their mind, going over details, in an effort to process what had happened.	*"That sort of goes on in my mind and I re-run that all the time and it takes me a long time to process that"*
Reflecting on emotional reactions	Study participants reflected on the emotional reactions induced by their experiences.	*"This is what I did find upsetting. It is one thing to know that they don't really care about you, I get that. I am just a cog in a big machine delivering a clinical service right and for them it is the numbers and the service I get that. But to actually feel it… Then I don't expect anything from them."*
Identifying and appraising other actors	Doctors identified other key actors within their experiences and appraised the role they played	*"I was specifically told [by management] that unless I agreed to work more than one in three and to cover my colleagues, I wouldn't be allowed to go on [annual] leave"*
Seeking new information	Participants sought out information, standard evidence and the opinions of trusted others	*"I had worked out by international guidelines; I was covering twice or a bit more than the recommended guidelines"*
Finding new and different understandings (reframing)	Through the process of situational sense-making and with the addition of new information, study participants reorganised or reframed their understandings of their experiences.	*"I would have blamed myself for not being able to continue to operate at that level and for a long time I attributed it to getting older, becoming less efficient with time rather than it being the job that was the issue. But having come back and going through a rehab program and experiencing what I did, I can see now that it wasn't"*

Structure of the Phenomenon of Transformative Self-reflection

During and following their experiences of mental illness and help seeking in the context of intense work stress, study participants engaged in a process of transformative self-reflection, which can be understood to occur in two ways: through deep reflection and associated transformation. Individuals engaged in deep reflection and transformation in parallel and iteratively. Transformative self-reflection was characterised by periods of active or passive deep reflection, significant, impactful moments of insight and associated conscious and unconscious change.

Within the process of deep reflection, participants engaged in a close examination of their experiences, of themselves and the ways they acted within the context of their experiences. They engaged in self-reflection with respect to the ways in which they live on a broader scale and entered into an examination of their personal history, life choices and career choices. They developed an appreciation of their human vulnerability and the toll a career in medicine had taken in terms of their physical, emotional, mental health and personal relationships.

In parallel with this process of deep reflection, the doctors began to make changes in their lives, which amounted to significant transformation. They began to practise self-protection and establish strong boundaries at work. Through the process of transformative self-reflection, and as a result of their experiences, a change in the type of doctor they were took place on a fundamental level.

Beyond the work sphere of their lives and following feelings of regret at what they had lost personally and in personal relationships, they rearranged their life priorities. They placed their personal health and wellbeing, as well as their personal relationships, at a higher priority than their work, recognising that they previously had given work the highest priority. They undertook personal development outside of work, learning new skills, expanding their social circles, experiencing growth, and embracing or deepening alternative life philosophies. On reflection, and despite challenges with working conditions, which they

accepted were likely to continue, they reaffirmed their love of medicine and their desire to continue to practise. This realisation was transformative in that it led them to refocus their energy on the positives within their work.

The phenomenon of transformative self-reflection is conceptualised in our findings in two (nonlinear) phases; 'deep reflection leading to insight' and associated 'transformation'.

Deep Reflection and Insight

Participants who engaged in deeper critical reflection demonstrated an **awareness of themselves and how they had acted within the experience**, particularly with respect to their natural tendencies and/or behaviours which were not helpful to them. Participants entered into a **reflection on themselves and how they live their lives on a broader scale**, beyond the specifics of the experience. The illness experience triggered a reflection on and **appreciation of participants' human vulnerability**, a consideration of personal limits and **a recognition of the toll their demanding work** had taken on their health, wellbeing and personal relationships over the lifetime of their careers.

Study participants made a critical **appraisal of their career choices** and assessed their current desires and needs with respect to their working life. Despite their difficult experiences, for all doctors, the benefits of working in medicine outweighed the challenging working conditions.

Constituents of Transformative Self-reflection – Deep reflection and insight

The key constituents of 'Deep reflection and insight' are presented in Table 15.

Table 15: Key constituents of transformative self-reflection – deep reflection and insight phase

Deep reflection and insight		
Key Constituent	**Constituent Description**	**Supporting Quote***
Self-reflection in the context of the experience	Participants demonstrated an awareness of themselves and how they acted within the experience.	*"your mood goes down and you get mildly paranoid'[you think] 'management are all bad, they are all out to get me, and the other clinicians don't support me, they are all horrible'. That is not really true, that's a script running, it's not real and I realised, [I need to go to the GP]"*

Self-reflection on a broader scale	Their experiences led doctors to reflect on themselves, and how they live their lives in a deeper way, beyond specifics of the experience.	*"you reach a stage when you have to really appraise yourself, where you are at, you have to go and ask yourself some serious questions. My identity and my identity with my work would be very closely entwined. If you asked me my identity outside the workplace, it would be less developed. That's not good."*
Appreciation of human vulnerability and the toll of a medical career	The illness itself caused the doctors to reflect on and appreciate their human vulnerability, to consider their personal limits and to recognise the toll of a career in medicine	*"to be totally honest it's not burnout I am worried about, it's premature death (laughing) and genuinely there are some colleagues of mine internationally that have dropped dead suddenly and you wonder is that the stress, you wonder are they putting themselves under too much stress"*
Questioning career choice and reaffirming desire to practice	Study participants made a critical appraisal of their past and future career choices.	*"I am back about three years now and every now and then I would think is it time maybe I should leave but' funny enough I don't wish to leave…although work can be terrible and it really is difficult it is also one of the most interesting jobs that you will ever do, and it is so rewarding and great fun"*

* Four participants fully engaged in the process of transformative self-reflection; the essential structure of the phenomenon was developed from their accounts only.

Transformation

Participants admitted to not prioritising their health, wellbeing and, in some cases, personal relationships prior to their illness. Following their experiences, participants took account of what they had lost, and they **revised their priorities**, for the first time, placing themselves, their health and personal relationships above their work. They reassessed what is most important to them in life and found a new appreciation of loved ones.

Further to transformation in their personal lives, participants began to **practise self-protection and established clear boundaries** at work, to preserve their personal health and wellbeing. Some developed a tougher, more hardened approach within the work environment, becoming political and/or extremely vigilant in their dealings with management and, at times, cancelling services and clinics when staffing levels were insufficient as opposed to overstretching themselves and their teams. They maintained a detachment from patients and colleagues and did not take on work outside of their remit. This contrasts with how they would have behaved in the past, limiting their own lives and health to fill shortfalls in service delivery.

Participants consciously worked on broadening their range of activities and developing their sense of identity outside of work, which led to **personal growth.** They engaged in further education, artistic pursuits and hobbies. Some **embraced new philosophies** or immersed themselves more deeply in philosophies which they had a prior interest, such as stoicism, eastern spirituality, mindfulness and alternative therapies such as reiki and reflexology.

Doctors that engaged in transformative reflection recognised that there had been a **shift in their values and attitude with respect to work** as a result of their experiences, especially when they reflected back on the type of doctor they were prior to illness and earlier in their careers. Generally, there was an openness and a generosity of time, energy and personal resources, which has been curtailed and replaced by a more cautious, self-protective attitude. Further transformation in values and attitudes at work occurred that were unique to each doctor.

Constituents of Transformative Self-reflection – Transformation

The key constituents of 'Deep reflection and insight' are presented in Table 16.

Table 16: Key constituents of transformative self-reflection – transformation phase

Transformation		
Key Constituent	**Constituent Description**	**Participant Quote**
Rearranging priorities	Doctors revised their priorities, for the first time, placing themselves, their health and their personal relationships above their work.	*"My own marriage broke up and I think work was a big part of that, I was spending so much time at work… My wife is an amazing lady and I think she tolerated an incredible dysfunction in work life balance. I didn't give her the time that she deserved and that was a mistake…. since that time when work was so hectic, I realised I need to commit to the things that really are important, my family will be a huge part of that."*
Self-protection and establishing boundaries	The doctors began to practice self-protection and establish clear boundaries at work	*"Over the years what I have learned is that you have to have a balance. You want to be a good doctor and you want to be empathetic, but you have to sort of protect yourself emotionally and you have to have a little bit of detachment"*
Personal development and embracing	Participants broadened their range of activities outside of work and embraced new	*"I ended up going to another alternative therapist, and it was actually fascinating and bizarre. It was the strangest experience I have ever had but very deep, meaningful, and relevant.*

new philosophies	philosophies which led to personal growth.	*At that time, I was seeing a psychologist, but I felt all I was doing was talking, , and in a way I don't need to keep talking out, I needed to stop talking, I needed something physical."*
Shift in values and attitude at work	There was a shift in doctors' values and attitude with respect to work, especially when they reflected back on the type of doctor that they were earlier in their career.	*"Well, obviously the lack of support from my employers was, really, destructive and it certainly has changed me (tearful) and in some respects I am sad about that because I am not the same doctor that I was... I would always have been somebody who couldn't do enough, would seek to address what issue they had even if it wasn't directly in my sphere of responsibility, whereas now I would just say you need to discuss this with your GP and just hand it back where it belongs."*

Results of Secondary Analysis – illness, help seeking, context, support, outcomes

Illness experience

A summary of participants' illness experiences is provided in Table 17.

Table 17: High level summary of the illness experiences of study participants in no particular order

Participant*	Illness experience
1	Overwork, serious physical illness, and burnout
2	High work demands, bereavement, conflict with management, subsequent mental health crisis
3	High work demands, burnout, anxiety, depression
4	Overwork, burnout, subsequent marriage breakdown
5	Overwork, anxiety, burnout, mental health crisis
6	Bereavement, bullying by management, depression

*Participant illness experiences have been not linked to other participant details to protect anonymity

Perceived quality of the help-seeking experience

The quality of the help-seeking experience was perceived as positive or neutral by two of the doctors but perceived very negatively by the remaining four doctors and dominated by a lack of support from,

and acrimony with, their employer. Generally positive experiences with primary care physicians, private healthcare, occupational health, and employee assistance programmes were overshadowed by lack of support and acrimony from the employer which persisted in some cases throughout recovery and return-to-work.

Context – working conditions, culture, hospital size

All study participants described working beyond the statutory volume of hours with staffing levels insufficient to meet patient demand. They described being placed in situations, where optimum care could not always be delivered due to resource constraints. Four of the doctors were working within an environment described as conflict-oriented and in which timely replacement of absent staff did not occur. Two doctors working within conflict-oriented environments described experiences of bullying by management. The remaining two doctors, while working within a context of extreme work overload, felt supported by colleagues and staffing levels returned to normal in a relatively short timeframe without the need to engage in conflict. At the time of illness, they were working within larger departments consisting of greater numbers of doctors with established methods of collaboratively managing workloads, more collegial support, and less challenges with recruitment of replacement staff.

Social support

Within the data we could determine that three of the study participants had good social support throughout their experiences and three had low social support. For the purposes of this study, participants with a supportive spouse and/or friends and family, with whom they reported being able to talk to about their stresses and their mental illness, are described as having high social support. Participants without a supportive spouse and with little or no support from friends and family at the time of illness are described as having low social support.

Psychological status with respect to experience at time of interviewing

At the time of interviewing, in two cases there was a clear sense of resolution and moving forward from the experience of mental illness and associated help-seeking. For two of the doctors there was some resolution and a sense of moving forward, however, feelings of loss, hurt and anger remained. For two of the doctors, there was a lack of resolution, and they appeared to be still in a process of protracted sense making and rumination.

Engagement in transformative self-reflection, outcomes and other factors

All participants in our study engaged in situational sense-making but only four engaged fully in the deeper process of transformative self-reflection. Those that engaged in transformative self-reflection

had reached a sense resolution at the time of interviewing. Those who engaged only in situational sense-making, and who seemed to get stuck attempting to make sense of their experiences without entering into a process of deeper self-reflection and change, were less resolved and remained distressed about some aspects of their experiences. Other factors within our data which may be important in achieving a sense of resolution and coming to terms with this experience are working culture, social support and support received from employer or line manager. See Table 18 for a summary of these factors in relation to which participants engaged in transformative self-reflection.

Table 18: Participant-specific supplementary information in no particular order

Participant	Working culture	Hospital Size	Reported bullying	Perceived support from employer / line manager	Social support	Engaged in transformative self-reflection	Status at time of interviewing
1	Neutral	Large	No	Absence of support	High	Fully	Sense of resolution and moving forward
2	Neutral	Large	No	Well supported	Low	Fully	Sense of resolution and moving forward
3	Conflict oriented	Medium	No	Poorly supported and acrimonious	High	Fully	Sense of resolution with continued sense of loss, hurt and anger
4	Conflict oriented	Medium	No	Poorly supported and acrimonious	High	Fully	Sense of resolution with continued sense of loss, hurt and anger
5	Conflict oriented	Small	Yes	Poorly supported and acrimonious	Low	Partially	Lack of resolution and protracted attempts to make sense
6	Conflict oriented	Small	Yes	Poorly supported and acrimonious	Low	No	Lack of resolution and protracted attempts to make sense

Those who achieved a sense of resolution and moving forward at the time of interviewing had engaged in transformative self-reflection but were also working in a large hospital with a non-conflict-oriented working culture at the time of illness, reported no bullying and received support either from their employer or a friend or family member throughout recovery.

Those who achieved a sense of resolution with a continued sense of loss, hurt and anger at the time of interviewing did engage in transformative self-reflection and had high social support. However, at

the time of illness they were working in a medium sized hospital with a conflict-oriented working culture and were poorly supported by their employer through help seeking and recovery.

Those who had a lack of resolution at the time of interviewing and who were stuck in protracted attempts to make sense of their illness and help seeking experience had not engaged in a process of transformative self-reflection. They also experienced the most negative set of circumstances throughout illness and recovery in that they were working in a small hospital with a conflict-oriented working culture at the time of illness and reported bullying by management. They reported being poorly supported by management throughout help seeking and recovery and also did not have good social support at that time.

Discussion and Implications

In-depth studies on lived experience of burnout and work-related mental illness in hospital doctors are rare. To our knowledge, there are no studies of senior hospital doctors that include recovery, aftermath, and return-to-work. We identified essential descriptions of two types of reflective processes doctors engaged in during the aftermath of crisis: situational sense-making, and transformative self-reflection. Situational sense-making is concerned with working through and making sense of specific events. In contrast, in transformative self-reflection, individuals reflect in a deeper way on their experience, their history, themselves and their lives on a broader scale and this deeper reflection leads to change. This happens in a recursive and iterative way.

In our findings reflective processes emerged as a key component of coming to terms with burnout and work-related mental health crisis. With respect to recovery and return-to-work, extant burnout literature emphasises the importance of building resilience and coping strategies, changing jobs or work patterns, obtaining social support, increasing professional self-efficacy, developing vocational maturity and a better self-understanding with respect to work [232-234]. Developing a better self-understanding with respect to work undoubtedly requires self-reflection. Our research adds to this evidence by identifying the critical role that reflective processes played in recovery for this cohort, emerging as a more critical factor than, for example, changing jobs (which wasn't a viable option for most participants), building resilience, increasing professional self-efficacy or developing vocational maturity, the latter three factors being arguably already optimised in this group. Our research adds further nuance in this context for this cohort by drilling into specific reflective foci that were important for recovery, such as reflection on their human vulnerability and the toll of an extended medical career

and an honest, historical review and re-evaluation of their career choices which had the effect of reigniting their passion for medicine.

Our findings build upon the 2018 phenomenological work of Abedini and colleagues [132]. In their interpretive phenomenological analysis of internal medicine trainees, Abedini identified factors contributing to recovery. Our study extends Abedini's findings to explicate some of the mechanisms through which recovery occurs, which is achieved in part by engaging in reflective processes and by focusing on a senior cohort. In Abedini's study, participants were one to three years post-graduation, practising in the US and a median age of 30 years. In our study, participants were fully qualified consultants, mid-to-late career stage, practising in Ireland and ranging in age from 45-65 years.

Some parts of the recovery processes of consultants in our study that were common to the trainee group in Abedini's study were: adoption of self-protective practices and establishing boundaries at work; focusing on the positives of a medical career; and nurturing one's personal life outside of medicine. Our study advances understanding of these experiences in illustrating that reflection is a key part of how these changes take place. Differences relate to the advanced career stage of our participants. Resolving workplace challenges by rotating onto the next hospital, which aided recovery for trainees, was not an option for the consultants in our study. Nor could they mitigate their situation by increasing clinical competency, or finding senior role models, which were recovery factors available to trainees.

While not focused on burnout or healthcare professionals, Larry Davidson's qualitative phenomenological work on recovery from schizophrenia provides insight into mental illness recovery processes more generally. In his 2003 book 'Living with Mental Illness: Qualitative Studies of Recovery in Schizophrenia' [235], Davidson's phenomenological findings align with our findings in highlighting how reflective processes are integral to the recovery journey. Within our findings, seeking out new understandings of the situation and reframing was important for sense-making and a deeper study of oneself, one's history and life choices coupled with decisive action to protect oneself, establish boundaries and develop one's identity outside of medicine were important for achieving psychological resolution post illness. These have equivalents in Davidson's findings although with differences relating to differences in illness contexts. For example, in Davidson's findings the importance of narrative and self-understanding, reframing and meaning making in the recovery process is emphasised. Similar to the doctors in our study, the reflective processes of patients in Davidson's

analysis allowed them to make sense of their condition, experiences and how their sense of self was affected by it and to reflect on and reinterpret experiences in a way that was empowering to them.

Within our study, those who engaged only in situational sense-making, and who seemed to get stuck attempting to make sense of their experiences without entering a process of deeper self-reflection and change, were less resolved, and remained distressed about some aspects of their experiences. This aligns with meaning-making theorists [236], who suggest that only transforming one's own beliefs, goals and operating systems, as distinct from efforts to make sense of the specific negative event, can lead to growth. Further, protracted attempts to make meaning without positive outcomes have been found to lead to continued rumination, intrusive thoughts and depression [236].

While our study adds to current post-adversity growth theory[237] by providing essential, phenomenologically developed descriptions of a post adversity experience, it also uncovered a different emphasis within one dimension of the theory for this cohort. Participants in our study reported newfound appreciation of their own personal vulnerability in the aftermath of their experience, whereas in studies of post-adversity growth, while there is some appreciation of vulnerability post-adversity, people predominantly report experiencing newfound appreciation of their own personal strength and resilience [237]. Doctors are recognised to have high expectations of their personal resources and capabilities [15] and have been found to be more resilient than the general population [238]. The shift in perception related to personal strength for this cohort, although different to the shift in perception experienced by others post-adversity, may be just as beneficial for their recovery and protection against relapse.

Although the focus of this DPA was on recovery processes of individuals, the considerable impact of the working environment on recovery was also evident. All participants in our study experienced periods of extreme overwork preceding illness and described being placed in situations, where optimum care could not always be delivered due to resource constraints. Furthermore, those who were working in conflicted-oriented working cultures at the time of illness (to which they returned on recovery) and who reported being poorly supported by their employer through recovery had a lack of psychological resolution with respect to the experience at the time of interviewing. Considering our findings, it is likely that an individual's ability to deeply reflect on their experiences and make changes in their lives is an important part of adjustment post adversity. However, when the adversity is work-related, working conditions, culture and support received from the employer and/or line manager may also be particularly important. Existing evidence points to this, for example, burnout research

among trainees shows that the working environment is the biggest contributing factor in development of burnout [165] and reasonable workloads, support from management and positive organisational culture, including trust and competent leadership, are factors which lower burnout [221 239] .

Phenomenological studies from social psychiatry emphasise the importance of social support networks and cultural factors on development, recovery, and treatment of mental illness [235 240]. According to phenomenological social psychiatry each individual must be approached, understood and supported to recovery as an active constituting subject whose identity is formed in and through internal relations with other active, constituting subjects [240]. In other words, it is within a human community that we develop a sense of personal human identity to begin with and it is through intersubjective experience that we can be assisted to recover a sense of self in the aftermath of mental illness. In the context studied here, the human, cultural community is the hospital work environment and important social supports outside of family and friends are peers, line managers and those representing the organisation, such as the hospital manager, occupational health and human resource professionals. Given the importance of social support in recovery from mental illness, it is unsurprising that doctors in our study who were poorly supported within their hospital struggled to find psychological resolution post illness.

In our study, generally positive experiences with the participant's general practitioner, private healthcare, occupational health, and employee assistance programmes were all overshadowed by lack of support and acrimony from the employer. The particularly influential role of line managers in the help-seeking, recovery and return-to-work process has been highlighted in other research on doctors [18 207]. Our findings support the growing evidence that line managers, which in the case of senior doctors may be senior hospital managers and other representatives of the employer, have a highly influential role with respect to recovery following work-related mental illness. Our findings extend this thinking by showing that poor or absent support, and in some cases conflict instead of support, from line managers and/or hospital management may hamper recovery, causing further distress at a vulnerable time.

Strengths, Limitations and Future Research

Credibility of this study is strengthened by the different perspectives represented on the research group [217], consisting of an occupational health physician (female) with expertise in doctor's wellbeing and three experienced researchers (two female and one male) with expertise from the fields of human resources, organisational psychology, health psychology, health services and medical education. The

study is further strengthened by the rigorous analysis method. A limitation of this study is that it did not include senior, non-consultant hospital doctors not-in-training, a subset of whom would be towards the later stages of their careers and should be included in future research.

Recommended follow-on research to this study includes further exploration of why some individuals engage in transformative self-reflection while others do not and to what extent it can be encouraged in burnout sufferers. Factors identified within participant experiences which may have influenced their ability to recover also warrant attention. For instance, the conflict-oriented culture and experiences of bullying described by participants highlight worrying and unhealthy management behaviours which were perceived by participants to have contributed to their illness and hampered their recovery. Further research should seek to identify the prevalence of these behaviours, understand factors contributing to them and explore ways to ameliorate them.

Practical Implications

Our study suggests that employers and care providers should consider the deep existential impact of burnout experienced as a hospital doctor, especially in later career stages. Fostering deep, critical reflection during recovery and post adversity, being sensitive to the possibility of positive transformation, being poised to recognise readiness for change and guiding recovering doctors towards growth, present as opportunities to enhance recovery. Because of the close alignment of our findings to models of meaning making and post adversity growth, phenomenological social psychiatry, therapeutic interventions which draw on these models may be of particular benefit. For example, therapeutic methods which aim to assist recovering doctors in the exploration and reestablishment of meaning in their lives, variously named 'meaning constructs techniques' and 'meaning-oriented techniques' may be beneficial and have been well summarised by Marie Dezelic [241]. Our study has also highlighted the need for health organisations to tackle the line management void that exists within medicine particularly for senior doctors.

Conclusions

Doctors are regularly faced with difficult working conditions in which optimum care cannot always be delivered and which can precipitate or exacerbate mental health crisis. In recovering from mental health crisis, senior hospital doctors can engage in two processes of reflection, situational sense-making, and transformative self-reflection. Doctors reflect on their experiences to make sense of them and may reflect in a deeper way on themselves, their experiences, their history and their lives on a broader scale. Through this deeper reflection they may make changes to their priorities, values, and ways of living to recover and move forward. Engaging in this deeper transformative self-reflection may

lead to better outcomes and post adversity growth. Following an initial period of making sense of the specifics of their experience, it may be helpful to guide doctors in crisis towards transformative self-reflection and to encourage them, with kindness, to make positive and self-protective changes in their lives. With time they should be further supported to explore positive revisions of their views of self, their goals, priorities, and sense of meaning in life. If doctors are not well supported through this vulnerable time, particularly by their employer, recovery, adjustment, and positive outcomes may be more difficult to attain.

Chapter 5: Discussion

Introduction to the chapter

The original, primary aims of this PhD were 1) to understand the prevalence and experience of burnout and work-related mental illness of hospital doctors in Ireland, and 2) to identify priority interventions targeting work stress and burnout in this group. The following specific research objectives were established to achieve these aims:

1) To determine the prevalence of work stress and burnout of hospital doctors in Ireland;

2) In consultation with hospital doctors, to determine which interventions are most needed to tackle issues of work stress and burnout among hospital doctors in Ireland; and

3) To provide an essential description of coming to terms with a burnout or mental health illness as a hospital doctor, which is perceived to be caused or exacerbated by work stress and which includes help-seeking, recovery and return to work.

In achieving these objectives, the inclusion of the physician's voice and subjective experience was established as a key emphasis of the PhD. This PhD was completed in three studies with three associated academic papers. This final chapter will provide a summary of the key findings of the three studies. It will include a discussion of the practical implications and theoretical contributions of the work which will be followed by a consideration of the limitations of the project and recommendations for future research. The chapter will end with overall concluding statements.

Summary of Key Findings

Key findings Study 1

29% of Irish hospital doctors surveyed had insufficient work ability and there was no sex, age or grade difference. 70.6% reported strong or very strong desire to practise medicine, 22% reported good work-life balance, 79% experienced workplace stress, with effort greatly exceeding reward, exacerbated by overcommitment. Burnout was evident in 30.7% and was significantly associated with male sex, lower desire to practise, lower work-ability, higher presenteeism, higher ERI ratio and greater overcommitment. Apart from the measures of work ability and overcommitment, there was no sex or age difference across any variable. However, effort-reward imbalance and burnout were significantly lower in consultants than trainees.

Key findings Study 2

Practical, system-focused interventions were found to be most needed to tackle work stress and burnout of hospital doctors in Ireland. Challenges with basic entitlements, i.e., accessing statutory leave, knowing in advance when leave can be taken and being adequately covered when on leave were identified as requiring urgent attention. Other priority interventions identified were the integration of psychological support in the everyday working environment, time and training for clinical line managers to perform key management activities such as debriefing and education interventions which highlight work stress risks and care pathways, teach self-care and train doctors in how to support one another.

Key findings Study 3

In the aftermath of a mental crisis which is perceived to be caused or exacerbated by work stress, doctors engaged in two types of reflection in recovering from and coming to terms with their experience: interpretive reflection and transformative reflection. The structures of the phenomena represent the best summary of the results of the DPA. Interpretive reflection is concerned with working through and making sense of specific events. In contrast, in the process of transformative reflection, individuals reflect in a deeper way on the experience, themselves and their lives on a broader scale and this deeper reflection leads to change. This happens in a recursive and iterative way. The process was of coming to terms with mental health crisis was complicated when support from employers was perceived as poor.

Theoretical Contributions and Practical Implications of the PhD

Theoretical Contributions

The Phenomenological Description of reflection in the aftermath and recovery phase of crisis

The most substantial contribution of the current programme of research is the deeper understanding provided by the in-depth, phenomenological analysis of the experiences of senior hospital doctors in the aftermath of burnout and work-related mental illness. This study increases our understanding of recovery, return to work and return to life on a broader scale following burnout and work-related illness and builds upon early research on this aspect of burnout experience.

Understandably, the motivation of the medical profession and health systems to study factors that prevent and reduce the occurrence of burnout and work-related mental illness is greater than the motivation to study the experience and aftermath of illness[104]. However, complete elimination of work-related illness and burnout in hospital doctors, at least in the short term, is unrealistic.

Therefore, minimising their impact when they do occur and supporting doctors' recovery is also important. Research is emerging in the area and has so far been focused on factors associated with return to work[125] and on the evaluation of interventions to support recovery[104]. Studies of the experience of recovery and return to work are not common[242 243] . The identification, differentiation, and essential description of the two types of reflective processes; interpretive and transformative reflection provided in the current study are novel in the context of hospital doctor's recovery from work-related adversity.

Both quantitative and qualitative studies of burnout and work-related mental illness in doctors are predominantly focused on prevalence, antecedents, protective factors and intervention[78 101 102]. A number of very recent broad reviews on burnout and burnout theory conducted since 2022 represent the body of evidence generated in the burnout literature to date and recovery or aftermath of burnout do not feature[244-247]. These reviews cover factors that trigger burnout, individual factors which may modulate it, the effects of burnout on individuals and systems, ways to measure burnout, prevention strategies, and intervention strategies for mild burnout or to minimise burnout symptoms. A 2024 review[247] which is focused on driving system reform remains focused on contributing factors, mitigation, and designing adaptive systems to prevent burnout and does not contend with recovery or aftermath.

In contrast, our Study 3 provides valuable insight into this understudied aspect of burnout experience. The aftermath, recovery and return to work phase of burnout and work-related mental crisis were central to this work and the emphasis in our analysis was on coming to terms with this experience. It is the first phenomenological study, to our knowledge, of consultant hospital doctors' experiences of burnout and work-related mental illness with an emphasis on the later stages of the experience i.e., the aftermath, recovery and return to work. It builds on the phenomenological work of Abedini and colleagues who conducted an interpretive phenomenological analysis of internal medicine trainees to identify factors promoting recovery from burnout and factors that assist with the subsequent avoidance of burnout[132]. They identified factors which, on examination, included elements of realisation and transformation of certain views or ways of being as a doctor and as a person. These included, for example, the initial realisation that they were burnt out and the realisation that nurturing their personal lives outside of medicine gave them greater calm to face the challenges of medicine. Recovery factors also included refocusing on the parts of practising medicine which brought meaning to participants' lives and revising the expectations they had placed upon themselves to fit the unrealistic idealised role they had internalised of the 'good doctor'. The present study 3 adds to Abedini's work on factors contributing to recovery by illustrating that reflection is a key part of how these changes take place. For example, reflecting on feelings of hurt and disappointment at not being

supported when sick, and reflecting on their human vulnerability was part of the journey towards practising self-protection for the consultants in our study.

Study 3 of the present programme of research further extends the findings of Abedini's research by focusing on consultants as opposed to doctors-in-training and uncovering differences in factors contributing to recovery for the more senior cohort. In Abedini's study, participants were 1-3 years post-graduation from the University of Washington Internal Medicine Residency Program, were practising in the US and were a median age of 30 years old. In the present study, participants were fully qualified consultants, who were at a mid-to-late career stage, and practising in Ireland, with an age range of 45-65 years old. Some parts of the recovery processes in the present study on consultants, which were common to the trainee group in Abedini et al.'s study, were: the adoption of practices of self-protection and establishing boundaries at work; focusing on the positives that a career in medicine brings and the nurturing of one's personal life outside of medicine.

For the consultants in study 3 in the present programme of research, resolving workplace challenges by rotating onto the next hospital, which aided recovery for trainees, was not an option. Additionally, while increasing clinical competency, focusing on career development and finding senior role models were recovery factors for the trainees in Abedini's study, such issues did not arise for consultants in Study 3. Instead, realising the toll on health and personal relationships of a lifelong career in medicine and finding an appreciation of one's human vulnerability formed part of the recovery process for consultants but did not emerge from the trainee cohort in Abedini's study.

Prioritising the Physician's voice and subjective experience

The quantitative literature has brought us far in our understanding of burnout and work-related mental illness in doctors, yet our understanding of, and insight into, the experiences of hospital doctors in this context is limited. Qualitative methodologies are regarded as more useful than quantitative methods when the goal is to understand the perception of experience of a complex reality within a given context[111], yet the numbers of qualitative studies of doctors' experiences of burnout and work-related mental illness are relatively low, and particularly low for hospital doctors[108]. Sibeoni et al.'s systematic review and metasynthesis of qualitative research, of physician perspectives and experiences on any aspects of burnout identified 33 studies but found no qualitative study that explicitly explored physicians' experiences of burnout. Sibeoni et al. stated that 'when burnout was considered in the studies included in the metasynthesis, it always involved descriptions or definitions of burnout but never access to experience' and they highlighted the need for 'future qualitative research to explore in depth the subjective experience of physicians who have experienced burnout'. In 2014, two academic psychiatrists, García-Arroyo and Domínguez-López, highlighted the importance

of studying physicians' subjective burnout experiences and highlighted the inadequacy of quantitative methods to do so[130]. They emphasise the need for qualitative methods to answer the 'how' and 'why' of physician burnout experience, to generate unexpected and useful understandings of the phenomenon.

A key contribution of the present work is that it gives priority to the physician's voice and subjective experience in achieving the research objectives of the project. Within study 2, the two-pronged approach to data collection, which focused on hospital doctors' lived experiences of work stress and burnout and their preferences with respect to intervention, placed the physician's voice at the centre of the selection of the most needed interventions to tackle work stress and burnout in this group. In this study, organisational focused interventions were identified as most needed despite a preponderance of implementations of individual-focused interventions in health systems around the world. This highlights how the story changes when you involve the physician directly in qualitative research on burnout. The emphasis shifts and it is possible to get a clearer understanding of what may be needed in real world scenarios to tackle burnout. Within study 3, the DPA provides a faithful, 'near-real picture' of the reflective processes engaged in by doctors in coming to terms with burnout and work-related illness. This is achieved through the rigid DPA methodology, in particular the steps of bracketing and free imaginative variation[131].

A need to focus support on both the consultant and trainee cohorts

Levels of psychological distress and burnout are consistently found to be higher among doctors-in-training than consultants[133 134].The results of the quantitative arm of this programme of research are consistent with these findings. Due to this difference in prevalence across grades, the majority of research in the field has understandably been focused on the trainee cohort. However, levels of burnout and mental illness among the senior cohort reported in the literature are still high[135], mirrored in the findings of Study 1, and higher than the general public[199]. Furthermore, when considering the burden of a problem, it is important to consider impact as well as prevalence. The phenomenological arm of the present programme of research demonstrates, in rich detail, that suffering burnout or work-related mental health crisis as a senior doctor is experienced as a major negative life event, which has a deeply destabilising effect both inside and outside of work. To come to terms with the experience requires great effort, involving: the processing of difficult emotions such as hurt, shame, regret and loss, including loss of identity; engagement in difficult, deep reflection; and considerable transformation. For some, a sense of resolution may never come. So, although, the evidence suggests that training is the major pressure point for doctors and there is a perception that challenges with

work stress lessen when you become a consultant, this is not the case for everyone, and the present study shows that factors such as working conditions especially staffing levels and management culture play a role and vary from hospital to hospital. This misconception is well articulated in the words of one of our consultant participants: *'there was this perception, wrongly as it turns out, that when you reached the green hills of becoming a consultant, it would get easier and in fact it doesn't'*. It is a further contribution of the present programme of research that it highlights the need to focus attention, in terms of prevention and support, on the consultant cohort as well as the trainee doctor cohort.

Expansion of guiding theories in the context of hospital doctors

This programme of research was guided by a framework of theoretical models and theories. The theoretical framework was specifically drawn upon in the development of the quantitative survey instrument used to measure baseline prevalence of work stress and burnout in Ireland and in the development of the topic guide for the qualitative interview study which explored experiences of work stress, burnout and help-seeking in a cohort of doctors. While it was not the intention of this programme of research to test these models and theories, the findings of the research can expand our understanding of these long-established theoretical frameworks within the contemporary work context of hospital doctors.

With respect to Siegrist's effort reward imbalance in the domain of reward what is lacking is the fundamental reward of adequate rest for a job well done. In our study salary, esteem and promotion opportunities and security were all rewards that were afforded the doctors interviewed, however the fundamental reward of holiday time off, adequate rest, sufficient cover while on leave and appropriate sick leave were not. See Figure 11 below for a schematic representation of this modification to the ERI model.

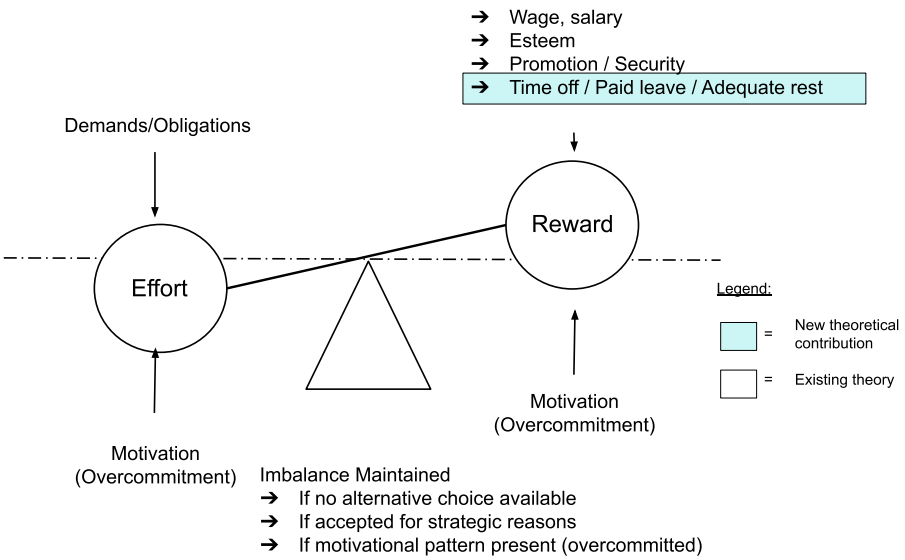

Figure 11: Theoretical contribution to Siegrist's effort reward imbalance model

Considering both Lazarus and Folkman's theory of stress and coping[67], and the Health Belief Model[86] of health behaviour in light of the findings of this research, what both of these theories are missing are contextual and cultural factors, which influence one's ability to cope and seek help. These contextual factors, in the context of Irish hospital doctors, relate to support or lack thereof, specifically the management void which exists for doctors, especially senior doctors, limited peer-to-peer support due to lack of processes and self-preservation, lack of adherence to occupational health recommendations and limited resources depending on the size and nature of the hospital within which doctors are based. With respect to cultural factors, continued stigma and silence around doctors' mental health, presenteeism, toxic and conflict-oriented cultures in some hospitals, as well as a general discouragement and lack of facilitation of self-care practices and boundary setting, were identified within the context of coping with and seeking help for burnout and work-related mental illness in this study.

In Lazarus and Folkman's model of stress and coping, an individual's ability to cope with stress hinges on two key processes: cognitive appraisal and coping strategies. Our findings suggest that contextual and cultural factors directly impact these appraisals and, consequently, coping actions and motivations. For example, limited management support and resource constraints in smaller hospitals may reduce a doctor's confidence in their ability to address stressors, negatively affecting secondary appraisal. This could diminish motivation to take proactive coping actions, as they may feel the environment lacks sufficient structural or organisational support. Similarly, cultural stigma surrounding mental health could inhibit emotional coping strategies, as doctors might fear professional repercussions or social judgment for seeking help. These contextual and cultural

elements create barriers that influence not only the perception of stress but also the motivation to engage in adaptive coping strategies, such as seeking support or accessing mental health services. This highlights the need to contextualize stress and coping within broader organisational and cultural frameworks.

In the Health Belief Model, perceived barriers and health motivation are central components that influence whether individuals take health-related actions. Contextual and cultural factors can amplify perceived barriers and undermine health motivation. Contextual factors, such as limited management support, resource constraints, and a lack of peer-to-peer collaboration, can increase the perception that help-seeking is impractical or inaccessible. Cultural factors such as continued stigma and silence around doctors' mental health, presenteeism, toxic or conflict-oriented workplace cultures, and the discouragement of self-care and boundary setting can also influence perceived barriers and health motivation in the Health Belief Model. The stigma surrounding mental health creates fear of judgment and professional repercussions, making help-seeking feel risky and amplifying perceived barriers. This discourages doctors from addressing mental health issues and reinforces a culture where prioritising self-care is seen as weak or unprofessional, especially in environments marked by presenteeism and toxic workplace dynamics. Additionally, the lack of encouragement for self-care and boundary setting undermines health motivation by reducing the perceived value of engaging in health-promoting actions. These contributions are highlighted graphically in Figure 12 and Figure 13.

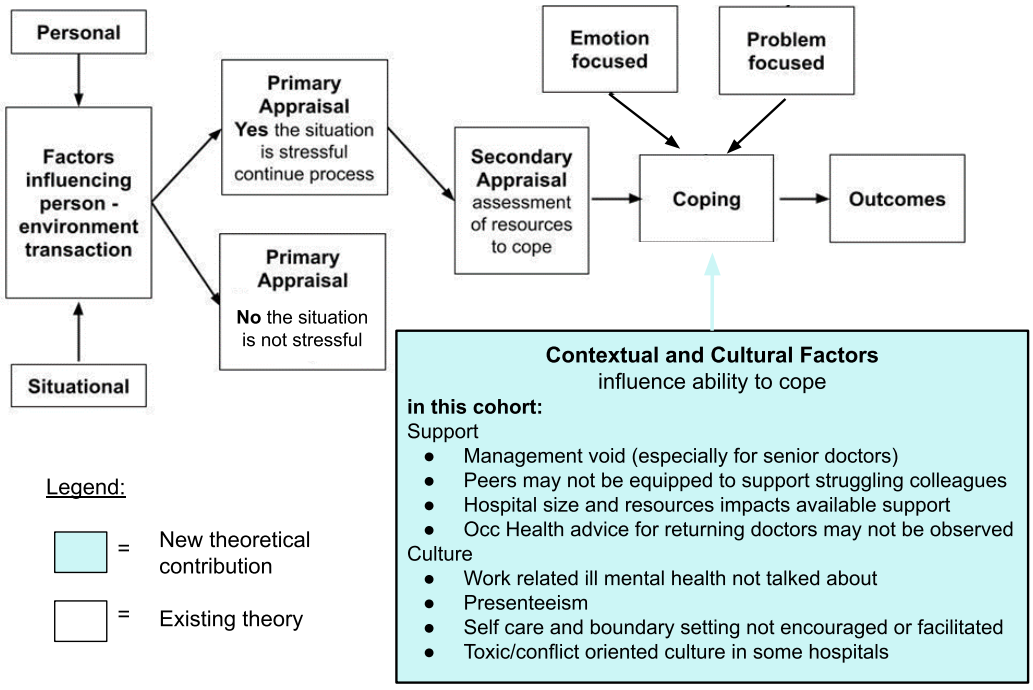

Figure 12: Theoretical contribution to Lazarus and Folkman's transactional model of stress in the context of hospital doctors

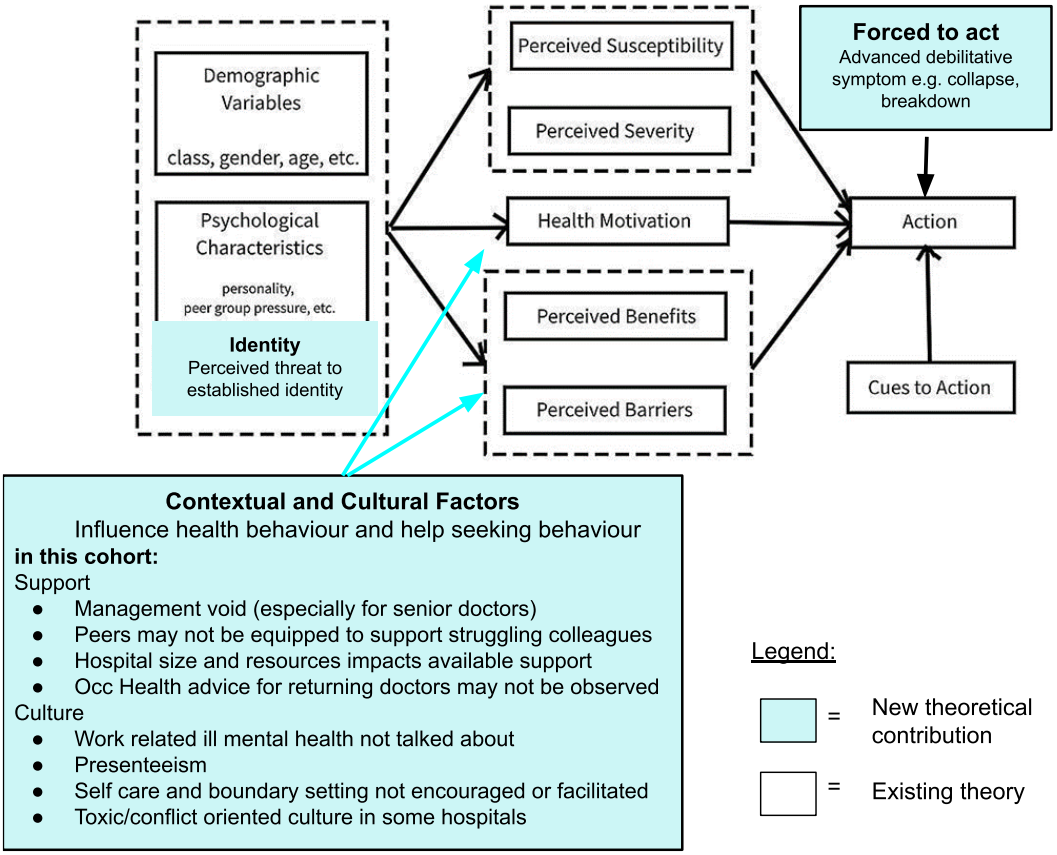

Figure 13: Theoretical contribution to The Health Belief Model in the context of hospital doctors

From our findings, two further theoretical contributions can be made which expand upon The Health Belief model[86] in this context. Firstly, within the psychological characteristics which contribute to a person's likely health motivation and their perceptions about their illness and the benefits of seeking help, identity emerged as a potentially influential factor in this present programme of research. Specifically, in individuals with a strong sense of personal identity, such as the hospital doctors in our study, a perceived threat to established identity is likely to influence whether, how and when they seek help. This perceived threat may be experienced merely by internally acknowledging the existence or extent of the illness, by voicing concerns about the illness or by considering seeking help for the illness. Secondly, as well as a cue to action, such as a prompt from a concerned friend, or recurring symptom, the model needs to allow for more dramatic and involuntary routes to healthcare which can be considered occurrences whereby the struggling individual is 'forced' to seek care. Experiences such as fainting and experiencing panic attacks and confusion during active care in the hospital, narrowly avoiding a car accident due to extreme work strain and suicidal ideation were some of the ways in which doctors in our study were forced to seek care in our study. These two further

modifications to the Health Belief Model, 1) the influence of perceived threat to established identity on health behaviour and being 2) forced to seek care in a way that is outside of an individual's control e.g. a breakdown, are also depicted in Figure 13.

On review of the elements within Maslach's conceptualisation of burnout, Figure 14, in the context of our findings, it can be concluded that elements within the model did a good job of representing the experiences of doctors in our study with respect to the lead up to and experience of burnout. In particular, the factors posited by Maslach to contribute to prolonged stress and subsequent burnout closely matched the experiences of doctors in our study and all were experienced to greater or lesser degrees. Most reported experiencing excessive 'workload' and patient demands without having sufficient 'control' over the resources needed to meet this demand and continue the safe running of their service. With respect to 'reward', what was missing for many doctors studied was adequate rest for a job well done. 'Community' and 'fairness' came to the fore for doctors in the study who felt unsupported by their hospital managers, who were working within conflict-oriented cultures with acrimonious relationships with management or who felt unjustly targeted or bullied when trying to highlight shortcomings in the system.

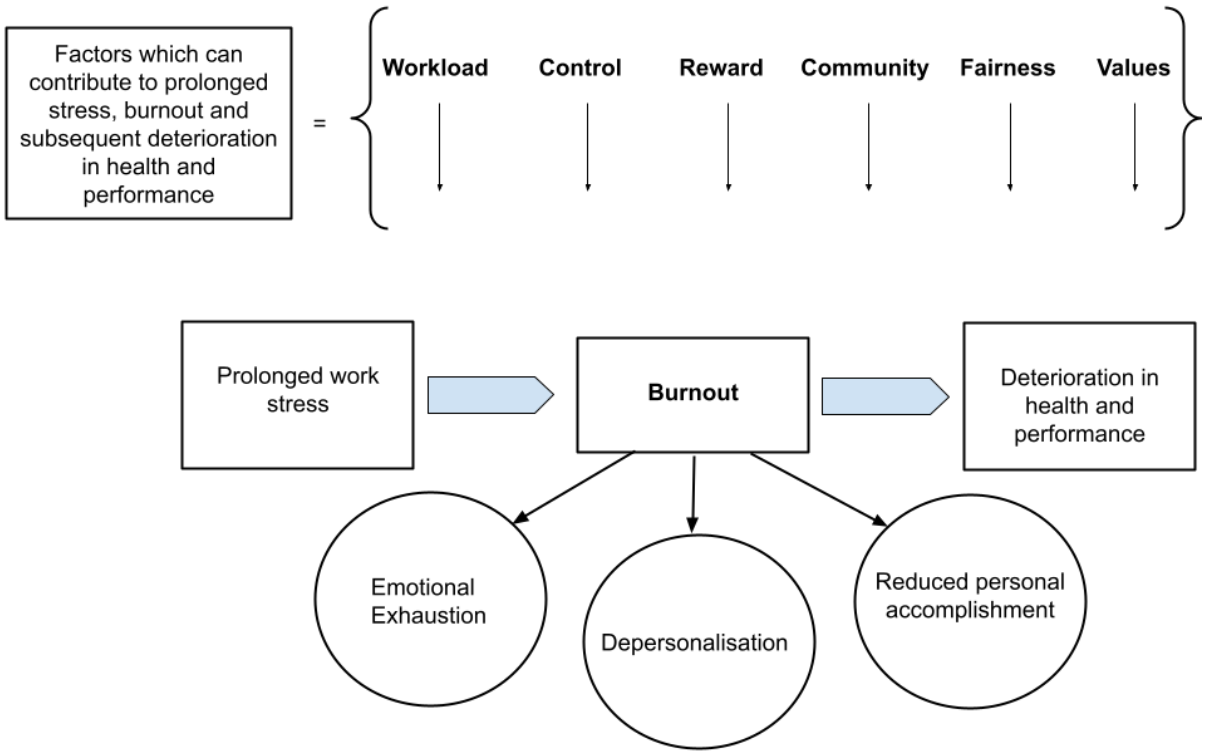

Figure 14: Maslach's conceptualisation of burnout

Where Maslach's conceptualisation may fall short however, along with the other guiding theories discussed above, is with respect to what happens after burnout or mental health crisis has occurred. How is recovery achieved? How is the aftermath of burnout experienced? And how do people come to terms with their experiences and return to work? The findings of study three of this programme of research go some way to answering these questions.

Expansion of Guiding theories in the context of Hospital Doctors

Within occupational health and organisational psychology, and as part of work stress and burnout research, recovery has been approached from a position of burnout symptom reduction and stress management to avoid acute illness. Research has been focused on immediate tangible outcomes, managing and minimising symptoms often while continuing to work. The types of approaches studied include activities like practising psychological detachment from work while away from work[97 98], mindfulness[99], focusing on personal resource conservation and restoration[100] cognitive behavioural therapy[126], interventions which modify working conditions[104], and allowing time for recovery from fatigue[127 128]. While these theories and research foci provide practical guides to managing and reducing burnout symptoms, they do not contend with the more profound, existential aspects of deep and sustained recovery from acute and severe burnouts. This phenomenological study highlights that a burnout or mental health crisis, perceived to be caused or exacerbated by work stress, is experienced at an existential level as a major negative life event that requires great effort and deep reflection to come to terms with.

While the present study does not attempt to explain the full range of phenomena experienced as part of the recovery process from a major burnout or mental health crisis, it does provide deep insight into two of the processes involved in the attainment of deep and sustained recovery from crisis. These are situational sense making and transformative self-reflection which are described in detail as part of C hapter 4 of this thesis. Figure 15 below depicts how these findings begin to address the dearth of research in the fields of work stress and burnout on sustained recovery from acute burnout and work-related mental illness. This contribution constitutes the primary theoretical advancement of this thesis.

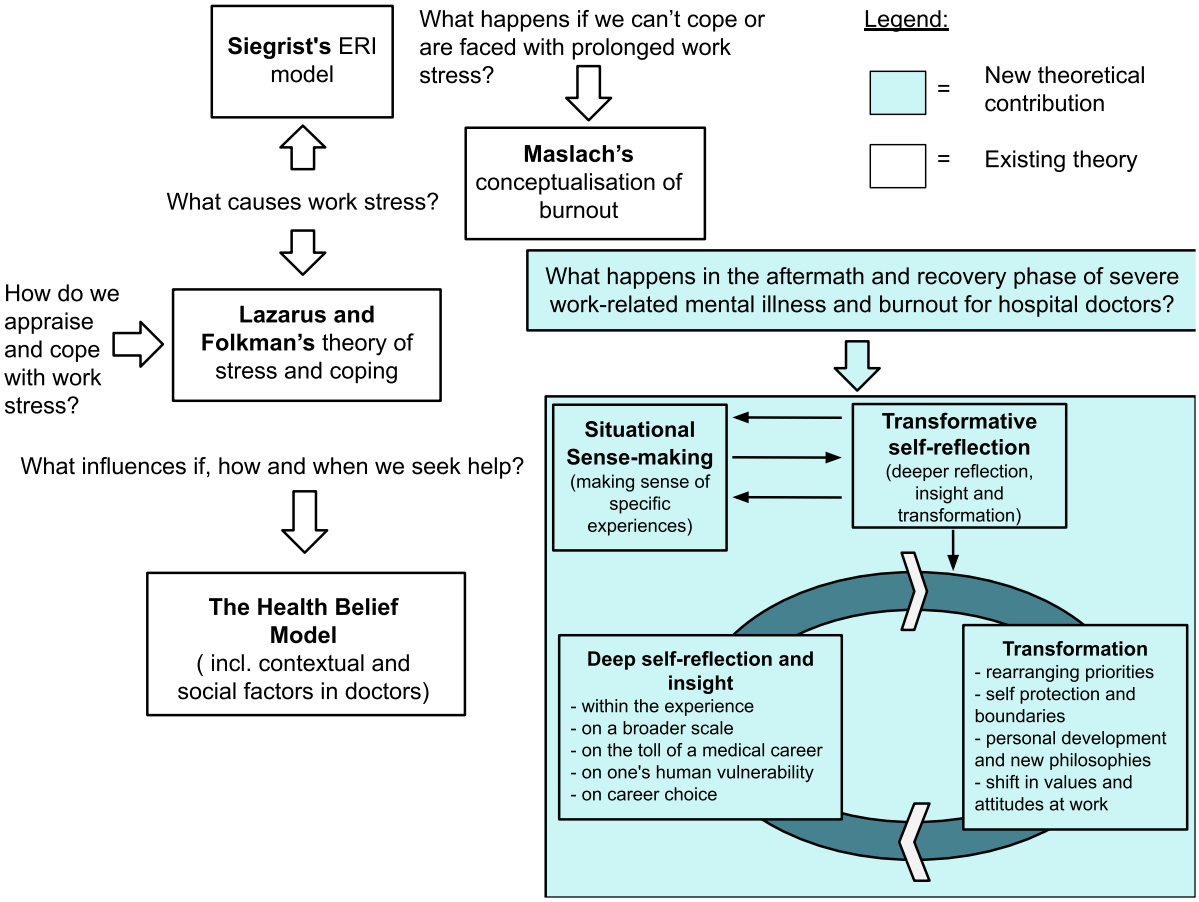

Figure 15: Primary theoretical contribution of the thesis: identification and phenomenological description of two processes of reflection and transformation which occurs in the attainment of deep and sustained recovery from acute burnout and work-related mental crisis

Work Stress, Burnout and Recovery Theory

A further contribution of study three of this programme of research is in demonstrating that the recovery processes which occurs following an acute burnout or work-related mental health crisis may be similar to processes experienced in recovery from mental illness more broadly. It highlights an opportunity to explore the integration of modern recovery theory with work stress and burnout theory. However such an integration is beyond the scope of this thesis.

The modern recovery movement focuses on the idea that recovery from mental illness is not just about the elimination of symptoms but is a broader and more holistic process. This process involves rebuilding a meaningful, satisfying life, even while managing ongoing symptoms or challenges. It contrasts with purely medical or symptom-focused approaches, which might aim solely at reducing symptoms without addressing broader life satisfaction or personal goals[248-250] Within the movement, recovery is seen as a deeply personal and individualised non-linear process, which emphasises addressing all aspects of an individual's life, including physical, emotional, social, and spiritual well-

being[250]. These theories underscore the importance of social support networks, and addressing and overcoming stigma, both self-stigma and societal stigma[248-250].

As discussed earlier, research focused on the reduction and management of work-related stress and burnout symptoms in the field of burnout and work stress has begun to proliferate[97-100 104 126-128] and considerable progress has been made in the holistic treatment of and sustained recovery from mental illness more broadly through the recovery movement[248-250]. However, a direct and comprehensive integration of these two areas, specifically applying the holistic, person-centred, and meaning focused approach of recovery theory to work-related mental illness and burnout, has not been realised in the literature.

This represents a significant opportunity for future research and practical application. Integrating recovery theory's holistic, person-centred, meaning-focused approach into the study of work-related mental illness and burnout could lead to more effective interventions that not only address immediate symptoms but also support doctors in achieving long-term, meaningful recovery and well-being. It would also help them come to terms with a profound and negative experience which is likely to have had a deep impact on their meaning systems, sense of identity and self-view. This integration would also involve a shift in how organisations view recovery, from a focus on managing work-related symptoms to supporting the overall life and well-being of their employee.

Practical Implications

A National Prevalence of Physician Work Stress and Burnout

The identification of nationally representative prevalence data for work stress and burnout for hospital doctors in Ireland allows for advocacy for physician wellbeing in Ireland and comparison with physician cohorts internationally. When this study was initiated, there was no nationally representative estimate of work stress and burnout for hospital doctors in Ireland. Despite much anecdotal evidence that doctors in Ireland were enduring work stress and suffering burnout on scales comparable to their international counterparts, it was not possible to demonstrate this with evidence. Neither was there a strong evidence base with which to advocate for improvements in supports to hospital doctor's mental health and wellbeing in Ireland. By conducting a cross-sectional survey of work stress and burnout in a representative sample of hospital doctors in Ireland, it is now possible to use reliable data as a basis for advocacy for improved wellbeing for doctors in Ireland. The results of study 1 were published as part of a national report, which was officially launched collectively by the participating professional colleges. An extract from the report is shown in Figure 16 below. The results

were presented at local and national conferences and to key stakeholder groups and covered by the national press in Ireland.

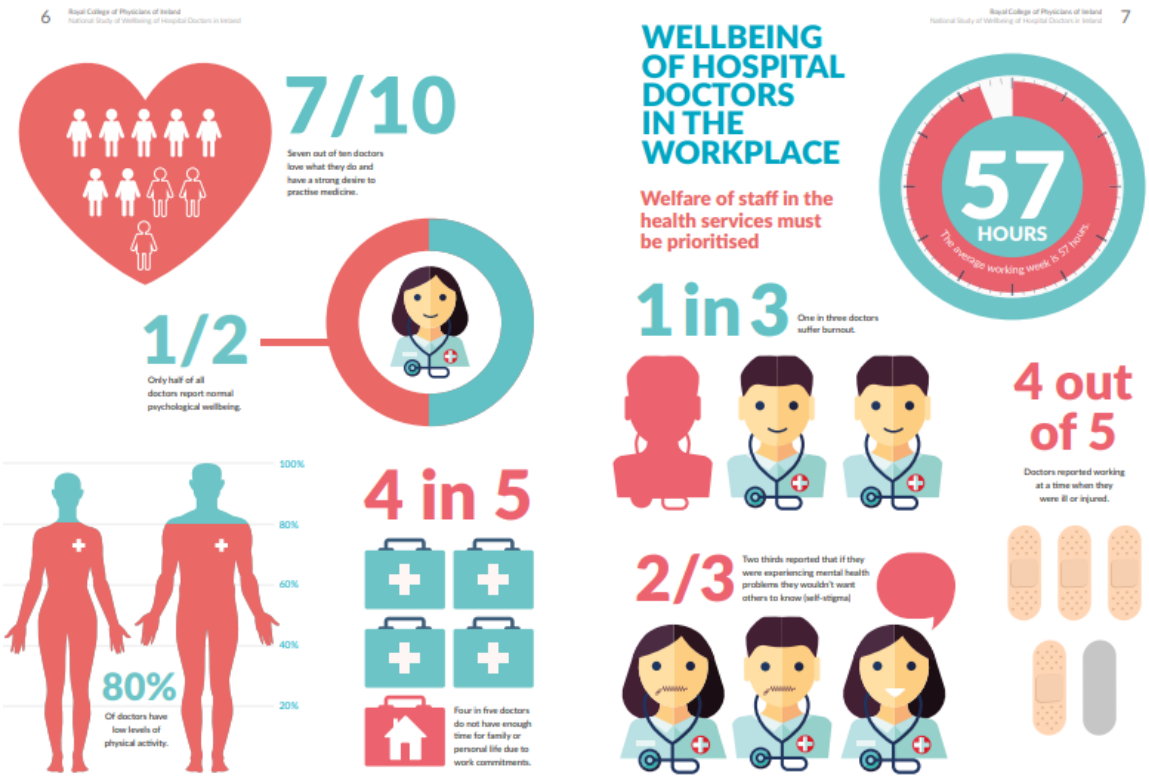

Figure 16: Extract from the report on the National Wellbeing of Hospital Doctors in Ireland

As well as providing an evidence base for the advocacy of physician wellbeing in Ireland, a further practical contribution of this work is that it allows for comparison of Ireland's prevalence of work stress and burnout with that of other high-income countries. A very recent meta-analysis of effort-reward imbalance (ERI) in physicians[62] introduced in the introduction chapter of this thesis, included the cross-sectional findings of ERI from study 1 of the present programme of research and is a clear marker of the practical contribution of this work. The review included 41 studies from a number of countries including Germany, Switzerland, France, The UK, Norway, Sweden, Japan, China, Mongolia, the US and Brazil. All studies used Siegrist's ERI scale[58]. Studies include physicians working in multiple specialities and the most commonly studied specialties were surgery, internal medicine and anaesthetics. Within the review, studies which implemented the ERI measure using a 4-point Likert scale, as opposed to a 5-point Likert scale were deemed likely to reflect a more useful result. In the ERI questionnaire guide, Siegrist et al. strongly recommend the use of the 4-point scale to avoid respondents over-using a central, neutral answer if available. Within the ERI measure, high effort reward imbalance (an ER ratio greater than 1) indicates work stress and ERI prevalence is calculated by determining the percentage

of physicians within a sample who had high effort-reward imbalance. The combined prevalence of effort-reward imbalance across the studies that used the 4-point scale was 70.2% [62.4 – 77.7]. On the higher end within this group of studies, which includes studies from Germany, Switzerland and Japan, was the ERI prevalence of hospital doctors in Ireland in the current study 1 at 81.8% (see Figure 17.)

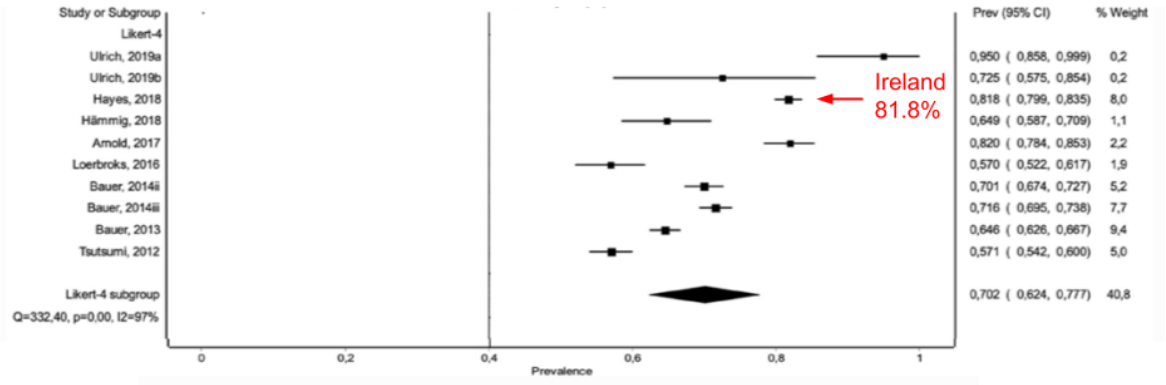

Figure 17: Meta-analysis of Effort-Reward Imbalance prevalence among physicians[62]

Looking more closely at the studies, the Swiss and Japanese studies are most comparable to ours, as respondents were hospital doctors from a range of specialties and have reasonable sample sizes (n=235 and n=1103 respectively). If we consider the three studies German, these represent surgeons, anaesthetists and internal medicine physicians and collectively represent a comparable cohort to our study population. These four prevalence estimates then become Germany 68.7%, Switzerland 64.9%, Japan 57.1% and Ireland 81.8%. It is less useful to compare our results with the results of the other studies in the above meta-synthesis as the numbers are small or the cohort represents only one small specialty e.g., urology. It appears, from this comparison, that Irish hospital doctors are experiencing higher ERI than comparable cohorts of their peers internationally. The implication of these results is that more needs to be done to ensure hospital doctors internationally feel adequately rewarded for effort expended, especially in Ireland where the mismatch is perceived to be even greater than in comparable health systems.

With respect to physician burnout, it is now also possible to see how prevalence in Ireland compares to prevalence internationally. Rotenstein and colleagues identified 182 studies involving 109,628 doctors in 45 countries in their systematic review of physician burnout prevalence in 2018[79]. While 85.7% (156/182) studies used a version of the Maslach Burnout Inventory[107], variation in study designs and burnout ascertainment methods, as well as statistical heterogeneity ruled out a meaningful meta-analysis, however a summary synthesis of a subset (45 studies) of larger studies was possible. Studies were included in the summary synthesis if they had at least 300 participants, used a full-length

instrument to assess burnout and clearly indicated the criteria used to label individuals as experiencing burnout. Countries captured in the qualitative synthesis from Europe include Belgium, Denmark, France, Germany, The UK, Italy, The Netherlands, Portugal, Spain and Switzerland. A single study on burnout in urologists from the UK included a cohort of urologists from Ireland. This study is useful for comparison with the present study but represents only a small subset of Irish hospital doctors. The synthesis also included 13 studies of doctors from North America, a number of studies from China, Japan, and Taiwan, two studies from Australia, a study from Yemen and one from Peru. Due to variations in how being 'burnt out' was defined in the different studies, for comparison it is more useful to consider the burnout subcomponents of emotional exhaustion, depersonalisation and personal accomplishment, although even these were computed with some variation. The following Figure 18 is a graphic representation of % prevalence of emotional exhaustion from the 33 studies of the summary synthesis which reported it, and includes an overlay of Ireland's prevalence data in red. The majority of studies reported an emotional exhaustion prevalence of 20-50%. The emotional exhaustion prevalence of Irish hospital doctors in study 1 of the present research was 52.3%, and the breakdown across grades was from 61% for BSTs to 59.% for HSTs and 45.7% for consultants. When compared with the 22 studies which used the MBI-HSS instrument, as we did in our study, using greater than or equal to 27 as the cut off point for emotional exhaustion, Ireland features in the top five.

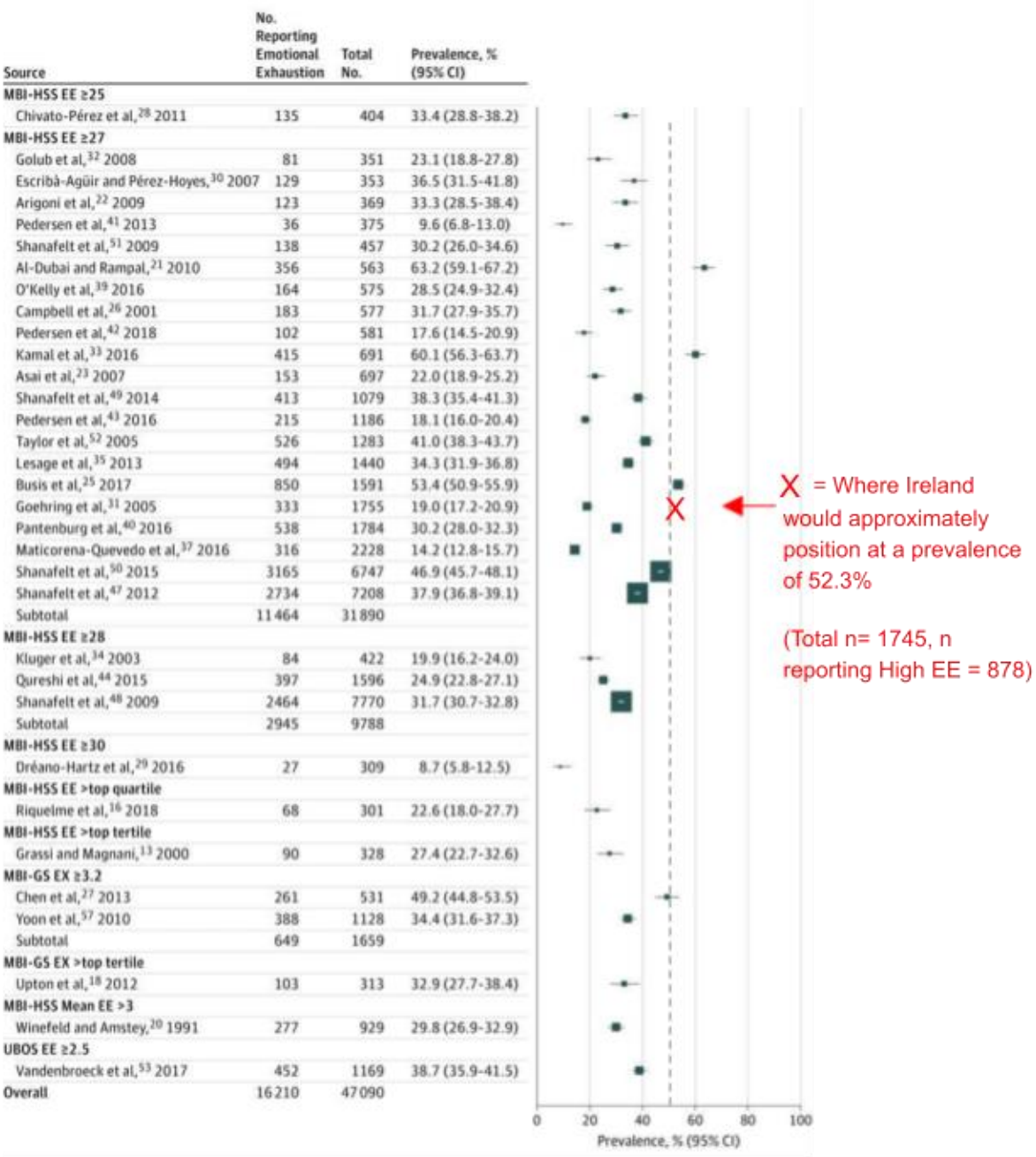

Figure 18: Prevalence of Emotional Exhaustion Reported by 33 Studies Stratified by Assessment Method[79]

The following Figure 19 is a graphic representation of the % prevalence of depersonalisation from the 30 studies of the summary synthesis which reported it. The majority of studies reported a depersonalisation prevalence of 10-40%. The prevalence of depersonalisation of Irish hospital doctors in study 1 of the present research was 28.6%, and the breakdown across grades was from 43.3% for BSTs to 38.3.% for HSTs and 18.3% for consultants.

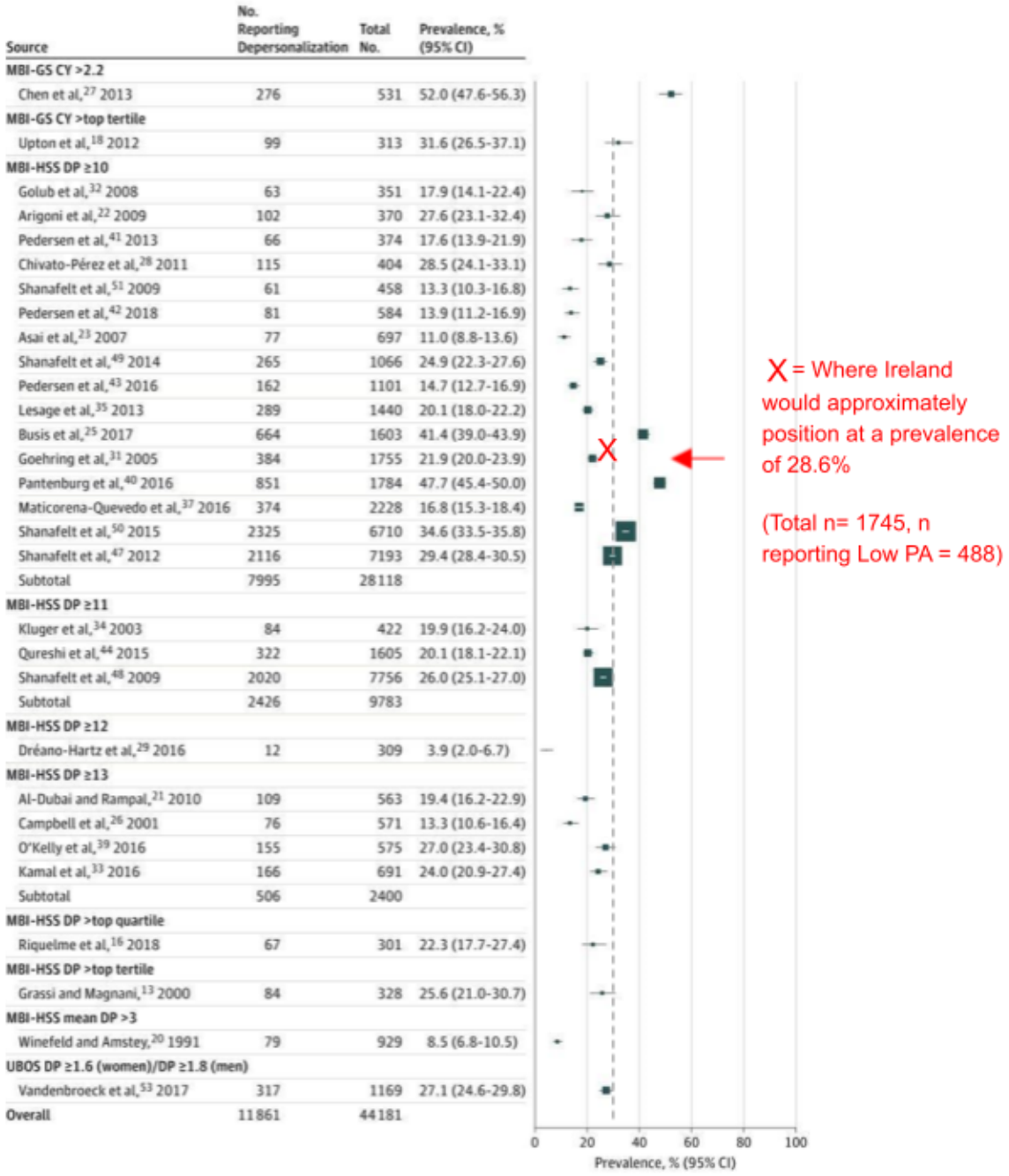

Figure 19: Prevalence of Depersonalisation Reported by 30 Studies Stratified by Assessment Method[79]

The following Figure 20 is a graphic representation of % prevalence of a diminished sense of personal accomplishment from the 28 studies of the qualitative synthesis which reported it. The majority of studies reported a depersonalisation prevalence of 5-40%. The prevalence of low sense of personal accomplishment of Irish hospital doctors in study 1 of the present research was 28.6%, and the breakdown across grades was from 43.3% for BSTs to 38.3.% for HSTs and 18.3% for consultants.

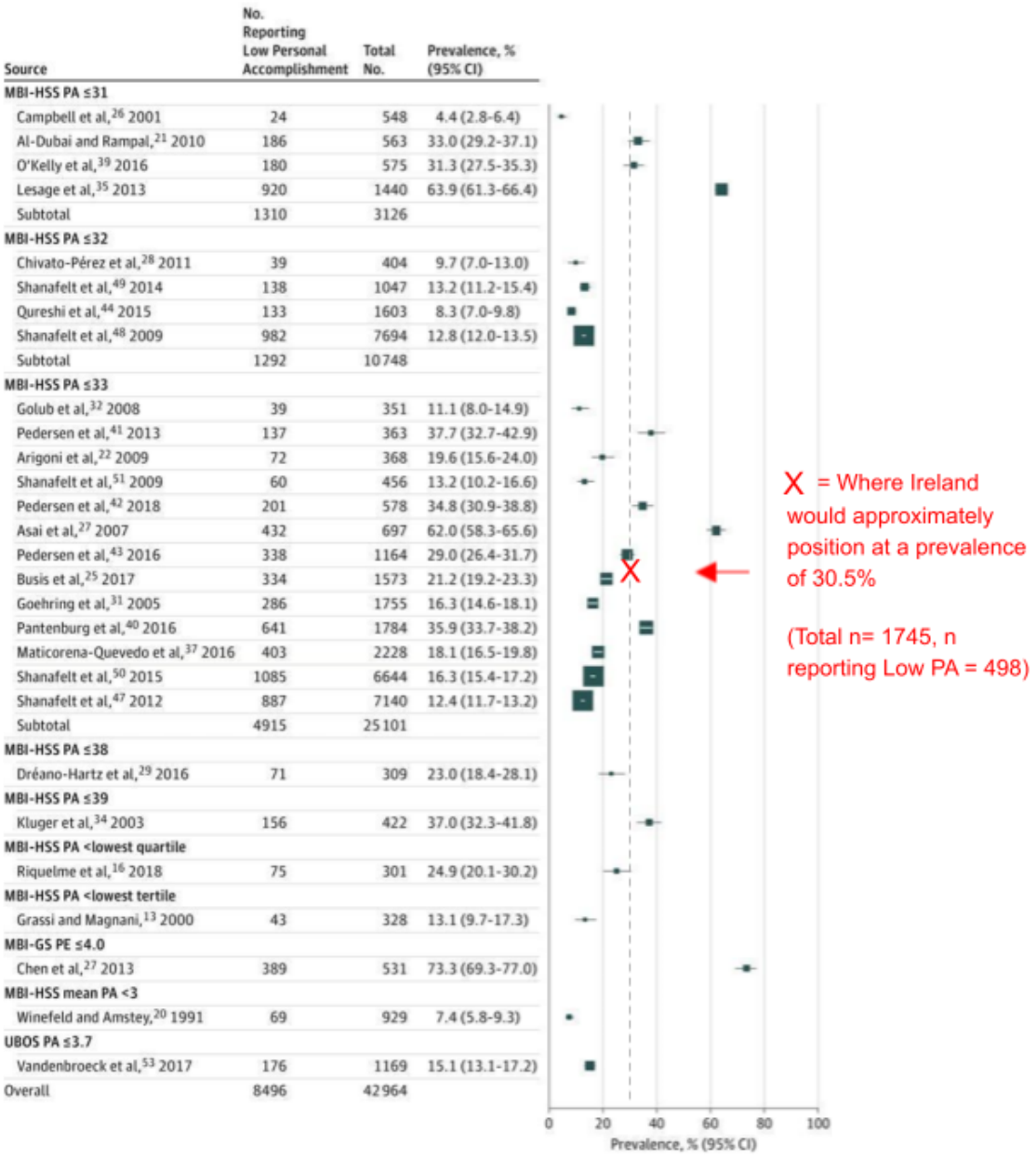

Figure 20: Prevalence of Low Personal Accomplishment Reported by 28 Studies Stratified by Assessment Method[79]

Hospital doctors, especially in Ireland are experiencing emotional exhaustion, depersonalisation and reduced personal accomplishment at levels beyond that of their international peers. While harming doctors' mental and physical health, high burnout levels among doctors also results in poorer patient care, including increased medical errors and reduced empathy[30 31 170]. It drives career dissatisfaction[167 168] and early retirement[251] further compounding staff shortages, increasing costs, and disrupting team dynamics, which in turn reduce access to care and increase costs for patients. These results highlight

the extent of this problem in Ireland and call for intervention and system reform at a fundamental level.

Organisational change is of greatest need and at a fundamental level

The most substantial practical implication of this programme of research is that it provides further evidence in support of the emerging argument, in the literature and among the medical profession[102-104 123] that organisational-focused interventions may be of greater need than individual-focused interventions to tackle the burnout epidemic in doctors. This comes across from all three of the studies in this programme of research but is most strongly evidenced in study 2. Another implication of the work is that it highlights that, in this Irish cohort of doctors, the primary interventions needed to tackle burnout are at a fundamental, system level. Interviewees frequently described scenarios reflecting a hospital system under strain and sustained pressure to meet unmanageable demand. Staffing levels were viewed by most interviewees as unsafe for staff and patients. The highest priority interventions identified are concerned with achieving appropriate staffing levels and facilitating adequate rest for doctors by ensuring they can avail of basic leave entitlements. These include being allowed to take the statutory amount of annual leave from work, knowing in advance when leave can be taken and being adequately replaced when on leave, including sick leave. Gaps in basic HR management practices to support these basic entitlements were also highlighted. These needs are important considering the established link between poor HR management practices within hospitals and patient mortality[162]. The issues raised reflect ongoing problems in Ireland with recruitment and retention[37] of hospital staff especially doctors and perceived lack of long-term resource planning[23].

A number of systematic reviews conducted in the last decade on burnout interventions in doctors have been able to demonstrate that secondary level interventions, are most commonly evaluated, primary level interventions, are least commonly evaluated, and tertiary level interventions, while commonly implemented, are not well evaluated[102 104 123]. Most evaluations included in the reviews found small improvements in burnout levels however which types of interventions are the most effective remains unclear. As evidence begins to show that factors within the work environment, rather than individual attributes, are the major drivers of burnout in doctors[119], the overemphasis on individual level interventions has been criticised by physician researchers[122] and in health and safety reports from public agencies[123]. The present study supports the thinking that organisational level change is of greater need than individual level intervention.

While primary interventions were overwhelmingly identified as most needed in the present research, secondary and tertiary interventions were also identified, and the ones most needed reflect the tension between the individual and the organisation. This again highlights the considerable influence

of the system in doctors' experience of burnout and work-related mental health. For example, training in how to set boundaries at work and interventions to improve the effectiveness of line management for the sick doctor are examples of priority secondary and tertiary interventions identified in the present study. The practical implication of this is that a combination of primary, secondary and/or tertiary level interventions may have the potential to yield the best results in this context. This supports recommendations made by West et al. in their systematic review of burnout interventions in doctors[102].

The need for Self-protection to be adopted and facilitated

A further practical implication of this programme of research relates to the interaction between the individual and the organisation. Taken together, the high levels of overcommitment identified in this cohort of doctors in Study 1, the need for self-care and training in how to set boundaries at work identified in Study 2 and the shift in recovered senior doctors towards practising medicine in a self-protective way described in Study 3, highlight the need for physicians to do more to protect themselves from the demands of the system and the demands they place upon themselves. The emphasis here is not on resilience. It is not on making doctors capable of withstanding more stress but rather teaching them that they cannot withstand as much stress as they think they can. This is an important difference. It is about teaching them that it is ok to have limits in the amount of work strain they can absorb, while still functioning as a healthy doctor and person, and that many contributing factors to burnout lie outside of their control. It is about teaching them to learn where their limits are so that they can stay within them thereby protecting their psychological health and building a sustainable career. Of course, doctors operate within a system and may not always be in a position to observe these limits if the system is under great strain and staffing levels are suboptimal, and this is the tension. Doctors must strive to adopt a self-protective approach, and organisations must strive to facilitate their self-protection.

The doctors in the present study recognise the difficulty in taking adequate rest and self-protection within the current system. Adequate staffing levels, statutory leave, adequate cover when on leave, supportive HR and management structures are all necessary to facilitate self-care in doctors. The employer has a significant role to play with respect to working conditions. The profession must also play its part at a cultural level. Doctors must not disdain self-protection in others and infer weakness or shame on doctors who practice it. Many of the 32 doctors in the qualitative arms of this programme of research were taken by surprise by their own burnout. They felt that it would never happen to them and developed a deeper sense of compassion towards others struggling with work stress following their experiences. This may indicate that doctors who have not experienced a burnout personally may

still conform to the belief that struggling with work stress is a sign of weakness which may contribute to a lack of support for self-protective approaches to practising medicine. It is well documented that doctors perceive stigma as a barrier to disclosing mental health illness[252] and at a high level these same stigmatising attitudes may also be at play with respect to how doctors are perceived when trying to protect themselves psychologically by setting boundaries at work. An outlier participant within our qualitative study demonstrated a considerable lack of tolerance of doctors with mental health challenges stating that such individuals were not cut out for medicine and should leave the profession. From the senior cohort, this doctor may represent the views of others within the medical profession. Existing in a highly respected senior role, this doctor holds a position of influence. One that is likely to have great impact on peers and junior colleagues, and certainly more impact than a formal training programme on self-care delivered by non-medical faculty. This is the power of the hidden curriculum[15]. This attitude may not be the predominant one, but it highlights again the value of the voice of recovered doctors, and senior doctors in particular, to challenge and counterbalance this culture of intolerance.

Resource constraints and challenges with conflict-oriented culture in some hospitals

A further practical contribution of this thesis is the establishment of a more nuanced understanding of wellbeing of hospital doctors in Ireland than previously available through the cross-referencing of results from the various interrelated studies. The findings highlight the potential to zone in on more specific areas for improvement within the health system. Although the prevalence of emotional exhaustion was high, evident in over half of the doctors surveyed, Study one of this thesis identified the overall percentage of doctors in training with burnout at the time of study to be 38% and that of consultant doctors to be 24%, meaning more than 60% of doctors were not in a state of burnout at the time of study. Within Study two, doctors in training reported that high work stress levels experienced in one hospital were considerably reduced when they same doctors rotated to another hospital after 6 months, due to differences in how the hospitals were resourced and managed. In Study three, it was shown that differences in working and management culture in different hospitals, in particular hospitals with and without conflict-oriented working cultures, and resource constraints in smaller hospitals leading to less options of cover and more social isolation within work, may have been factors which contributed to burnout and hampered recovery for consultant doctors. Taken together these results suggest that the problem of burnout is greater in some hospitals than others and challenges may be specific to certain hospitals, hospital types and regions.

To address burnout in hospitals with conflict-oriented working cultures and resource constraints, targeted measures should focus on improving management practices, fostering collaboration, and reducing isolation. Hospitals should invest in leadership training to cultivate supportive and transparent workplace cultures while equipping managers with conflict-resolution skills. Smaller hospitals, often facing resource limitations, could benefit from flexible staffing models such as regional rotations, telemedicine to connect with larger centres, and increased government funding to support staff retention, and mental health initiatives. Professional support networks and mentoring programs can also help reduce social isolation, encouraging peer-to-peer learning and emotional support.

Tailored interventions should be designed to address the unique challenges of individual hospitals, regions, or types of facilities. Accessible mental health services, work-life balance policies, and regular staff surveys to identify burnout triggers are crucial components of a sustainable strategy. These steps, supported by data-driven monitoring, would not only alleviate burnout but also enhance patient care and overall system resilience.

The opportunity to nurture Reflective processes in recovery which can lead to positive outcomes for doctors

Abedini and colleagues have identified different factors which contributed to the healing process in trainee doctors[132] and study 3 of the present programme of research added factors which were important in the recovery experience for consultants. As previously discussed, the research findings add to this work by helping to explain some of the mechanics of how realisations and transformations, which are important for recovery from burnout, occur. The practical implication is that the reflective processes are an important part of how the recovery comes about and reflective processes can be nurtured, encouraged and supported in therapeutic interventions. The specific steps identified in the process of transformative reflection are all steps which any doctor can undertake, and which any doctor can be guided to undertake. These steps are described in detail in paper 3 but in summary are: self-reflection in the context of the experience, self-reflection on one's life and career on a broader scale, acceptance of one's human vulnerability, appreciation of the toll of a career in medicine and an evaluation of the personal suitability of a continued career in medicine and what that career might look like. It is important to note that these steps are useful to support doctors in recovery from burnout, but it does not apportion fault for its occurrence with the doctor nor does it absolve health systems of their responsibility to take action to change the existing working conditions and culture for the wellbeing of their doctors.

Recommendations for Theory

This programme of research has a number of strengths based on the varying methodological approaches taken with each of the three studies; nonetheless, there are a number of limitations that must be considered. Firstly, non-consultant hospital doctors who were not on a training programme were not included in the quantitative arm of this study. These doctors make up a significant proportion of the medical workforce in Ireland, they often come from outside the European Union, and their career pathways are frequently complicated and poorly understood[253]. They are a vulnerable group, with many non-national doctors who struggle with temporary contract status, differences in training, cultural differences, and discrimination[253]. Future research that incorporates their experiences of burnout and recovery should be undertaken to identify issues that are unique to them. Study 3 already identified how hostile work environments complicate the recovery process and thus, given that this group have been found to be more vulnerable to mistreatment, understanding their experiences in the context of intervention development is essential.

A further limitation which specifically relates to study 2 is that of self-selection bias. Self-selection bias is based on the idea that, within voluntary participation, people who consent to be involved in research may be different from those who do not, in ways that are not related to sampling criteria[254]. It is possible in study 2, that the original pool of volunteers, from which the interviewees were purposively selected, may have been a self-selected group who put themselves forward for interview because of particularly difficult, personal experiences and therefore may not represent the broader sample of doctors in Ireland. However, we know from the quantitative arm of this study that the prevalence of work stress in the national cohort was 81.8% and the prevalence of burnout was 29.7% and 25% (n=8) of interviewees did not have a previous negative experience with work stress or burnout. Or that it may have in fact been in the other direction, i.e., those with negative experience did not come forward because of reasons such as fear of disclosure, the sensitivity of the subject, being too busy and overloaded with work. It is not possible to know what kind of self-selection bias is present in the data, but what is important is that there were sufficient experiences of work stress and burnout to support the deductive analysis.

There is also not much that could have been done to eliminate potential self-selection bias, as voluntary participation is central to good ethical practice. However, it is still essential to be aware of it and consider its potential influence on findings and generalisability.

Not a limitation of the study design but rather the scope, the DPA focused on developing an essential description of the phenomena of interpretive and transformative reflection. Other interesting findings which emerged but were not the primary focus of the DPA can only be abductively inferred and warrant further study. These are findings relating to differences for outcomes of doctors who engaged in transformative reflection vs interpretive reflection and factors which may be associated with the likelihood and/or ability of an individual to engage in transformative reflection such as context, hospital culture and social support. Further research to better understand these tentative findings could involve quantitatively defining and assessing individuals' engagement in interpretive reflection and transformative reflection as a response to adversity through the development and application of measurement scales for each. Applying these scales along with instruments designed to measure outcomes such as growth, and psychological adjustment and factors such as context, culture and social support and comparing results in sufficient samples of individual's post adversity would allow greater elucidation of these phenomena. Such quantitative analysis would provide further insight into the potential value of transformative reflection in recovery. An exploration of the association between engagement in transformative reflection and the achievement of positive outcomes in the aftermath of physician burnout and work-related mental illness is recommended. An exploration of predictors of and barriers to full engagement in transformative reflection in the aftermath of physician burnout and work-related mental illness is also recommended.

Also beyond the scope of the current work was a detailed exploration of culture and how this impacts on the prevalence and experience of burnout, work-related illness and recovery. The conflict-oriented culture and experiences of bullying described by participants highlight worrying and unhealthy management behaviours which were perceived by participants to have contributed to their illness and hampered their recovery. An investigation of cultures of conflict within hospitals, in particular between management and consultants, which aims to understand the nature of the conflict from both perspectives, the antecedents of cultures of conflict and the factors associated with non-conflict-oriented cultures within hospitals is recommended. Incivility, disrespect, and bullying are particularly high in health care settings[255]. Highest rates of incivility and bullying have been reported by junior doctors and nurses from those more senior to them[256]. However, the problem is nonetheless apparent among senior doctors and emerging evidence suggests that consultants may be bullied by other consultants and senior managers'[257 258]. Our findings support this emerging evidence. Bullying and incivility behaviours capture some of the cultures of conflict described in the present study and should be included in any future study which looks at conflict in hospitals.

Practical Recommendations

With consideration of the findings of the present programme of research, the researcher proposes a number of practical recommendations. Firstly, and most urgently, there is a need to focus on improving staffing levels, cover and leave arrangements and human resource systems to facilitate adequate rest for doctors and to protect them from burnout. Staffing levels were viewed by most interviewees as inadequate and at times unsafe for staff and patients. What is needed are appropriate levels of clinical staff and support staff so that statutory leave entitlements including annual leave and health-related statutory leave, such as sick leave and maternity leave, can be facilitated. Systems for organising leave including annual leave, sick leave and maternity leave also require attention to address the gaps in HR practices identified in study 2. Doctors need to know in advance when leave can be taken and when a doctor is seriously ill, there needs to be Human Resource systems in place to organise cover. Current efforts focusing on the recruitment and retention of doctors in Ireland are appropriate and should continue to be invested in. For instance, the work of the National Doctors Training and Planning Unit is of crucial importance, as are the recommendations of the 'Sláintecare' report[259] and the ESRI 'Projections of Demand for Healthcare in Ireland, 2015-2030' report [260]. As smaller units have more difficulty with recruitment[44], the recommendations from the report 'Securing the Future of Smaller Hospitals: A framework for Development'[261] may also be particularly relevant. Results of Study 2 of the current research provide practical solutions which should also be considered which represent physicians' direct experiences and perspectives.

Levels of physician burnout and other measures of workplace physician wellbeing should be monitored as a quality indicator in healthcare with a view to tracking the impact of organisational level interventions such as medical workforce planning initiatives, and recruitment and retention initiatives, and any changes to the proposed consultant contract under the Sláintecare reform programme on doctors' health and wellbeing. Physician wellbeing is recognised internationally as an indicator of quality[262] and many hospitals measure it annually as a matter of course and use results in ongoing cycles of quality improvement[263]. In these hospitals measures of physician wellbeing are considered of equal importance to measures of patient outcomes such as length of stay, patient satisfaction and mortality.

The findings of both qualitative studies in the current programme of research highlighted a management void for doctors, which leaves a considerable gap in what would be normal support structures for other employees. Supervisor support has long been established as both a direct (negative) predictor of burnout and as moderating the impact of work overload on burnout[264]. Thus, in demanding work environments, such as hospital systems, supervisory support can play a critical role in buffering the impact of work strain on burnout. It is a key practical recommendation that doctors at all levels, including senior consultant level, should be afforded appropriate line

management support. When doctors are filling the role of line manager, they need to be given appropriate time and training to perform traditional line management tasks including identifying and supporting sick doctors through help-seeking, recovery and return-to-work.

Beyond improving staffing levels and line management skills, in order to tackle burnout and work-related illness in doctors generally, primary, organisational-level interventions or interventions which combine secondary, individual-level interventions and primary level interventions should be evaluated as a higher priority to secondary-level interventions which may have little impact. These should be evaluated longitudinally using randomised controlled designs and, provided issues with staffing and leave are addressed, could include interventions such as the integration of psychological support for doctors into the everyday working environment. Such as those identified in study 2 which would have an emphasis on debriefs following difficult cases and adverse events, self-reflection and career planning as distinct from treatment services.

While not a limitation of the research design, data collection for the current programme of research was conducted prior to the onset of the COVID-19 pandemic and therefore does not take into account the additional pressure on doctors as a result of this strain on the health system. Internationally, burnout levels, intentions to quit and numbers of doctors taking early retirement have increased since the pandemic[265] and levels of work stress and burnout in Ireland may also have changed significantly as a result. In future research, a repeat of the national cross-sectional study to gain an understanding of prevalence of work stress and burnout among hospital doctors following the COVID-19 pandemic and which includes non-consultant hospital doctors who are not enrolled on any training programme is recommended. A repeat of the national cross-sectional survey is also timely as the ambitious Sláintecare reform programme is still in its infancy. It will be important to measure the impact of this reform on doctors' health and wellbeing. Furthermore, the experience for hospital doctors of living through a traumatic period of work, such as the COVID-19, may have a bearing on the reflective processes engaged in in response to personal mental crisis and burnout. Working in a more life-threatening environment, with greater demands and reduced patient interaction may impact perceptions of effort and reward. Within transformative reflection the experience may impact on their assessment of the toll of a career in medicine on their perception of their personal vulnerability as well as critical appraisals of past and future career choices and on their life on a broader scale. Future research into the reflective processes engaged in, in recovery from mental crisis should be sensitive to potential findings related to the impact of the pandemic on doctors' reflective processes.

Concluding Statements

Hospital doctors in Ireland have levels of burnout which appear to be higher than their international peers, with occupational stress, presenteeism and poor work-life balance all appearing to contribute

to this burnout. What they most urgently need is adequate staffing levels, access to statutory leave and adequate cover when on leave. A continued focus on improved medical workforce planning and recruitment and retention is warranted to achieve this. Doctors also need better support from their clinical line managers who lack the skills and time to excel as people managers. Organisations should focus on developing clinical management skills across the system. Doctors themselves need to focus on self-protection from the system and from their own tendencies to overcommit. They need to accept self-protective approaches to work adopted by their peers and senior doctors need to role model healthy work behaviours to their junior colleagues and peers.

Importantly, the current research programme demonstrates that, when prolonged exposure to work stress leads to burnout and mental crisis for hospital doctors, this is experienced as a major negative life event, requiring great effort to come to terms with and potentially triggers two processes of reflection. Interpretive reflection which helps doctors to make sense of their experiences and a deeper process of reflection and contextualisation of their experience which is accompanied by transformative change in their lives, called transformative reflection. Although future research is required to elucidate these findings, engaging in this deeper transformative reflection may lead to better outcomes and post-adversity growth. As well as tackling burnout through organisational-level interventions to facilitate adequate rest for doctors, attention should also be placed on supporting hospital doctors through crises as they continue to occur. In this process, it may be helpful to guide them towards transformative reflection, involving deep, critical reflection and encourage them to make positive and self-protective changes in their lives with kindness. If doctors are not well supported through this vulnerable time, particularly by their employer, recovery, adjustment, and positive outcomes may be more difficult to attain.

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Appendices

Appendix 1 – General Overview of Working Life as a Doctor in Training and Consultant Doctor in Ireland

Life as a Doctor-in-Training in Ireland

In Ireland, doctors begin their training with a five to six year medical undergraduate degree at a university. This is followed by a 12-month internship in a hospital, after which time the trainee doctor can apply for a postgraduate position on a basic specialist training programme as a senior house officer. Basic specialist training takes approximately two years, is focused on developing skills within a particular speciality, such as paediatrics or anaesthetics, and is under the supervision of a more senior doctor and part of a team of doctors delivering a service. Once basic speciality training is successfully completed, trainee doctors can apply for competitive higher specialist training as a specialist registrar SpR which takes a further four to six years to complete. SpRs are given a greater level of responsibility including supervision of SHOs and this stage of training is designed to bring trainees' skills up to the standard required for independent specialist practice at consultant level (equivalent to attending physician in the US). All of these 'non-consultant hospital doctors' or 'doctors-in-training' are employed by the HSE, work almost exclusively in publicly funded hospitals and rotate to different hospitals around the country often, as frequently as every 6 months, during their training years. Many of them are senior in terms of age and experience despite being referred to as 'junior'. When compared to consultants more of their top stressors relate to the disruptions caused by frequent moves to their personal relationships and family planning.

Life as a Consultant Doctor in Ireland

Consultants are responsible for all the patients under their care and responsible for the clinical decisions made by other doctors under their supervision. Consultant doctors are expected to take on more responsibility than ever before and they are always involved in a certain amount of training and can also be involved in management, lecturing, research, and service reform. They must actively maintain their professional competence and are obliged to formally develop their competence and record their activities throughout their post-training careers. The challenges of their earlier career, such as competitive training, career uncertainty, frequent moves and lack of experience are supplanted by a new set of challenges. Albeit some universal challenges remain. In Ireland, consultants typically do not change roles often and tend to stay in posts for a long time meaning that after an earlier career of finding it difficult to build lasting relationships within short rotations they must now build and maintain healthy working relationships with colleagues they may have for twenty years or more. In smaller hospital settings, there may be only one or two consultants in a given specialty, and so, while doctors-in-training may enjoy the support of senior members of the team, the role of consultant can be isolating. When compared to doctors-in-training, the primary stressors of consultants relate to issues with service delivery and problems with hospital management such as a perceived lack of long-term planning, an approach by management which is perceived as quick fix and

reactive, inadequate staffing and infrastructure, feeling unvalued by their employer and patients and fear of litigation.