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“Whose job is it anyway?” Exploring work participation for people in pain

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UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

**“Whose job is it anyway?” Exploring work participation for people
in pain**

**A thesis submitted in fulfilment of the requirements for the degree
of Master of Science**

Author: Aoife Synnott

University: University of Limerick

**Supervisors: Dr. Katie Robinson
Dr. Kieran O’Sullivan
Professor Orla Muldoon**

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Thesis abstract

Musculoskeletal disorders (MSD's) are a group of disorders that affect the body's bones, joints, muscles and the tissues that connect them. The most common MSD is low back pain (LBP). The prevalence of MSD's is rising globally. This is concerning as MSD's lead to very significant personal, social and economic costs. There is good evidence to support the role of work in recovery from MSD's. Employment is proven to be important for people's physical and mental health and long term unemployment is associated with poverty, social exclusion, poorer physical and mental health and reduced quality of life. Despite the known benefits of work for this population, work disability rates remain stubbornly high amongst people with MSD's. Work disability among people with MSD's is complex and is not explained by physical factors alone. Studies of interventions to support the work participation of people with MSD's recommend good communication, collaboration and coordination between the individual, the workplace and healthcare providers. In practice, this has been difficult to achieve and there has been little research conducted to date on this topic. The views and experiences of the various stakeholder groups are central to understanding how multi-stakeholder collaboration can be achieved in practice. Although some international literature on this topic does exist it is imperative to explore this topic in an Irish context given the international variation in workers compensation systems, social protections systems and employment legislation. This thesis comprises two main studies which aim to:

- To synthesise the available qualitative literature on the experience of workforce participation amongst workers with low back pain (LBP) and the barriers and enablers of same.
- To examine the experiences of people with musculoskeletal disorders (MSDs), employers, health professionals and other key stakeholders involved in the return to work process to explore their experiences of work rehabilitation and retention.

Both aims were achieved through qualitative research methods. A meta-ethnographic synthesis of qualitative literature related to the work participation experiences of people with LBP was conducted to achieve the first aim. Following a systematic database search fifteen primary studies involving 320 people with LBP were included in the review and seven main themes were identified. These synthesised themes highlight that individuals with LBP largely feel unsupported at work and engage in strategies to remain working without actively seeking support from those around them due to a perceived sense of judgement confounded by a lack of understanding about LBP. Where help was offered, this was largely in a format that served to ease the biomedical aspect related to LBP by easing the load related to the work task. Rarely were the biopsychosocial dimensions of pain addressed or considered by the employer. The review identified two major issues: (1) employees with back pain feel largely unsupported with regard to enabling and maintaining work participation and (2) employees perceive that rehabilitation professionals and employers are focused on symptoms related to LBP and the work task rather than the emotional well-being and coping skills of the employee with LBP.

In the second study in this thesis a qualitative interview study with key stakeholders in the work rehabilitation process was conducted to explore in-depth their experiences related to the retention and return of work of people with MSD's. Semi-structured interviews were conducted with twelve people with MSD's, six employers with experience of managing and retaining employees with MSD's and five health professionals with experience of working with patient with MSD's. The transcribed interview data were analysed thematically. Four themes were identified: 1) The employee experience of working hard to balance pain and work participation; 2) Employers and HCP's are willing but not fully ready to support the work participation of people with MSD's; 3) Perceived dominance of a biological basis for pain, and 4) The Ominous nature of occupational health. These findings mirror to a large degree the findings of the qualitative meta-ethnographic synthesis. Across all stakeholder groups biological factors were most implicated as the reason for work absences and the resolution of symptoms was identified as the single greatest enabler of return to work. Although pockets of good

practice were identified, in the main, health professionals and employers describe uncertainty about their role and responsibilities and describe a narrow scope of practice. Patients report a mostly adversarial experience of vocational supports (e.g. Occupational Health services). Mirroring international research, Irish work rehabilitation stakeholders do not report awareness of the complex interplay of biological, psychological and social factors influencing work participation for people with MSD's. Vocational supports and services are hampered by role uncertainty and consequentially adversarial experiences for service users.

In the discussion chapter both studies are considered in light of one another and clinical implications and future research directions are proposed.

This thesis found that:

- The return to work process for people with MSD's is complex and work participation for people with MSD's is influenced by broader factors than the physical injury / disorder alone
- Employees with MSD's bear heavy burden of stigma, symptom management and self-management and feel largely unsupported in the workplace
- Employee experiences of occupational health services are mainly negative
- Although pockets of good practice were reported, in the main employers and health professionals have limited capacity and knowledge to support employees with MSD's

Key recommendations arising for this thesis are:

- Specific training and skill development among employers and HCPs is recommended to build competence in supporting employees with MSD's to return to and remain in work. Future research should identify how education is best delivered to achieve changes in practice and outcomes for people with MSD's
- Stigma reduction initiatives focused on back pain and MSDs should be considered. Future research should explore the perspectives of colleagues on working alongside employees with

MSD's and the effectiveness of stigma reduction initiatives in the workplace and broader community oriented stigma reduction campaigns.

Declaration

I declare that this thesis is entirely my own work and that it has not been submitted as an exercise for a degree at this or any other University.

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Signed: _____

Date: _____

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“The only people with whom you should try to get even with are those who have helped you.”

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List of Abbreviations

CASP: Critical Appraisal Skills Programme

CLBP: Chronic Low Back Pain

COREQ: Consolidated Criteria for Reporting Qualitative Research

ENTREQ: Enhancing Transparency in Reporting the Synthesis of Qualitative Research

HCP: Health Care Practitioner

HR: Human Resources

IBEC: Irish Business and Employment Confederation

ISME: Irish Small and Medium Enterprises

LBP: Low Back Pain

MSD: Musculoskeletal Disorder

MSK: Musculoskeletal

RTW: Return to Work

SFA: Small Firms Association

Chapter 1: Introduction to Thesis

1.1 Introduction to Musculoskeletal Disorders

Musculoskeletal disorders (MSD's), inclusive of back pain, shoulder pain and neck pain, are the second most common cause of disability worldwide, second only to mental and behavioural disorders (Vos et al., 2012). MSD's are classified as a group of disorders that affect the body's bones, joints, muscles and the tissues that connect them. Within the category of MSD's, low back pain (LBP) is the most common condition (Vos et al., 2012). The Global Burden of Disease Study analysis estimates that disability due to MSD's increased by 45% from 1990 to 2010, due in part to rising rates of osteoarthritis (Vos et al., 2012).

More recently, a report published by the Institute for Public Health (IPH, 2012), indicates an expected significant rise in MSD's in Ireland before the year 2025. The report emphasised that these findings have significant implications for individuals and families, the health and social care system and Ireland's economies. The estimates and forecasts gained within the report are likely to be an underestimate of the total number of adults with MSD's as they do not include all MSD's or undiagnosed cases. The expected increases assume that risk factors levels do not change over time. If levels deteriorate, the expected increases in the number of people with these MSD's will be even greater. A greater focus on prevention to reduce these risk factors and promote healthier lifestyles, particularly in relation to physical activity and occupational health will help moderate these increases. Prevention programmes should also address social, environmental and other issues that influence the development of MSD's (IPH, 2012).

MSD's have significant workplace consequences such as loss of self-identity as a worker, strained collegial relationship and often a work related increase in pain (Toye et al, 2016). However, the link between MSDs and the workplace has been underappreciated to date, possibly due to erroneous

assumptions that MSD's primarily impact older non-working age cohorts, and an assumption that the impact of MSDs is lower than other conditions with higher mortality rates (Summers et al., 2015).

1.2 Work and Health

There are often real health benefits associated with staying in, or returning to work, but many employers, clinicians and even employees feel that temporary or permanent withdrawal from employment is the only option for people with a MSD (Bevan et al, 2007). This is reflected in Ireland, with high work absenteeism rates amongst those with MSDs (Bevan, 2009) and high rates of work disability reported by people with Rheumatoid Arthritis (Sokka et al., 2010) and chronic pain (Raftey et al., 2011).

In a scoping review conducted by Waddell and Burton (2006), the authors explored the role of work and the consequent implications of unemployment and disability on well-being, overall health and quality of life. The authors surmised that the relationship between work and health is symbiotic and that work is integral in providing financial and social status as well as identity for the person. When work participation is disrupted, the authors noted a trend towards higher rates of mortality and increased medical consultations. When work disability arose, health consequences were seen to rise in line with people with MSD's experiencing health issues such as anxiety, and distress (McCracken, 2003; Waters, 2004). i.e. employment and socio-economic status are the main drivers of social gradients in physical and mental health and mortality. It was acknowledged by the authors that the distress was likely due to the painful condition but also the loss of routine and structure were implicated in addition. Waddell and Burton (2006) noted in their review that with a reinstatement of employment, the effects of anxiety and depression were often negated and people in work experienced improved physical function and self-esteem. Ultimately, the authors concluded that the beneficial effects of employment on physical, mental and psychological well-being, for the most part, outweighed the risk of work once these risks were properly assessed and controlled for.

Mental health difficulties or mental illnesses are also associated with high rates of work disability (Andersen et al, 2012). The literature related to mental health and the workplace has largely focused on the negative impacts of work and how it may contribute to the development of mental health difficulties (Andersen et al, 2012; Cullen et al, 2017). However, in a review conducted by Modini et al (2016), they noted that the benefits of work for this population are most apparent when compared with the deleterious effects of unemployment.

When exploring work and health, the changing context of work in light of recent economic challenges and changing work demands must be acknowledged. The technological age has resulted in a large proportion of the population working in the service sector and engaging in computer based and desktop orientated work. Due to increasing access to these systems and with more workers telecommunicating from home, the stressors related to work are changing (Braveman and Page, 2012). The era of computer based work and ‘working from home’ for many lead to less social interaction and reduced feelings of feeling like a team player (Braveman and Gottlieb, 2014). The shift in dynamic away from permanent, pensionable positions and towards part-time contract orientated work has in turn introduced its own financial stressors and a, loss of sense of security once offered. These new dimensions may need to be considered when rehabilitating the individual to work (Braveman and Gottlieb, 2014).

1.3 Work and Disability in light of an MSD

Despite changing trends in the workplace environment and demographic, there has not been an increase in the employment rate of people with disabilities, inclusive of people with MSD’s (Braveman and Page, 2012). People with disabilities are particularly disadvantaged within the labour market and are only half as likely to be in employment as others of working age (deVries et al. 2011). Braveman and Page, (2012) noted that the rates of those working with disabilities has not changed since the Second World War. The employment rate of those with disabilities has remained static at 35% (representative of those who have returned to work after acquisition of a disability), despite 72% of

those with a disability describing a desire and a motivation to work (Braveman and Page, 2012). Reflecting these statistics, many injured workers or workers with an MSD continue to struggle with returning to or maintaining work.

Across all European Union Member States, MSD's are the leading cause of work disability, sickness, absence from work and loss of productivity (Bevan 2015). The cost of lost productivity due to MSD's among working age people in the EU is estimated to potentially be 2% of Gross Domestic product (Bevan, 2015). In Ireland, MSDs are the number one cause of work absence, accounting for 50%, with a direct cost to the economy estimated to be of €750m per annum (Bevan, 2009).

Work disability is described as a state in which the worker is unable to remain at work due to injury or disease (Cancelliere et al, 2016). Work disability is depicted as a complex process influenced by a range of systems or factors. In a model of work disability first illustrated by Loisel and colleagues (2005), the worker is depicted at the centre of the model surrounded/ encircled by the workplace system, the personal system, the health care system and the insurance system. The model (Figure 1) illustrates effectively how work participation and the maintenance of same is dependent on a harmonious balance being maintained between all encircled systems (Loisel et al, 2005).

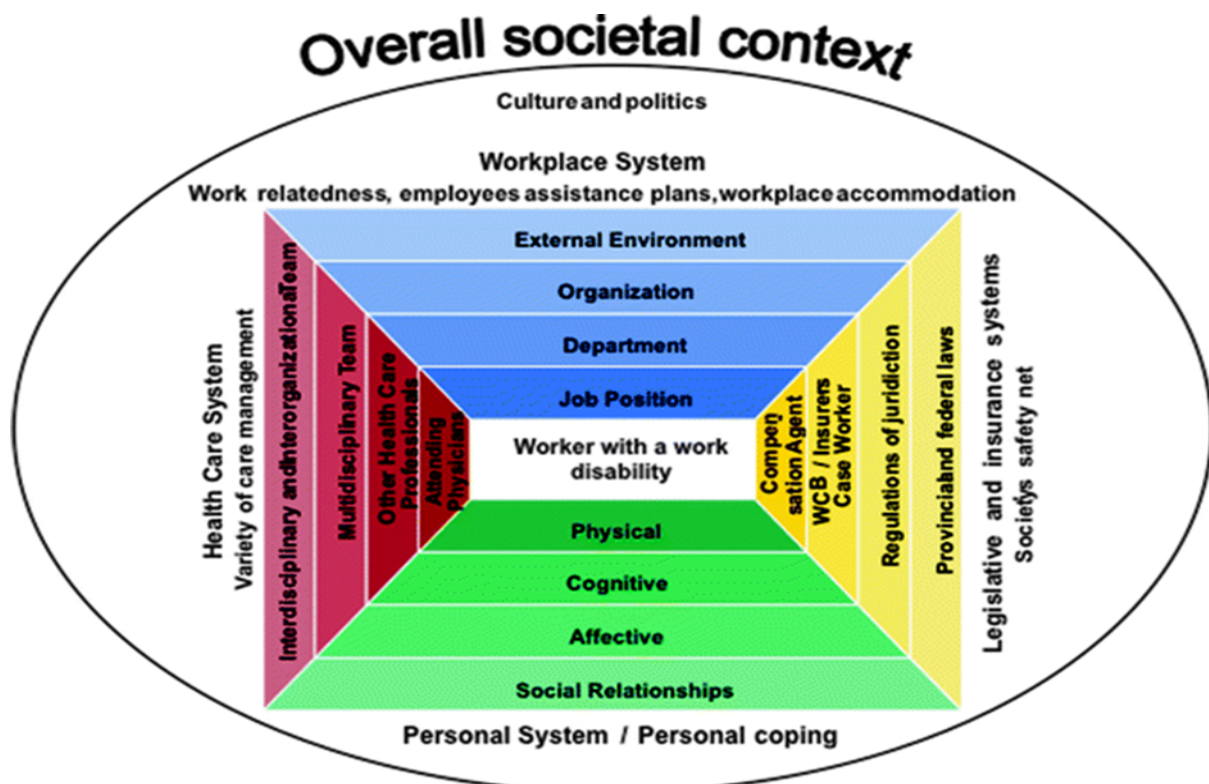


Figure 1: Work disability model (Loisel et al, 2005)

Despite insights gained from this model, further research is required to better understand the interaction between these systems and how they serve to facilitate or complicate the work relationship and the return to work process for the worker with a disability.

1.4 Predictors of Return to Work

Work disability and return to work cannot be viewed as unidimensional entities. Instead, they are best described as processes defined by multi-determined outcomes that cannot be predicted by the physical constraints or dimensions of the health condition (Foreman et al, 2006).

Multiple factors have been identified as influencing the return to work process for workers with MSD's including: Characteristics of the injured worker (age, gender, self-reported pain, functional capacity, motivation, self-efficacy, recovery expectations, anxiety and depression), physical (industry type, company size) and psychosocial job characteristics (collegial relationships, self-identity), workplace factors (stress, job satisfaction, supervisory relationship), components of particular medical and occupational rehabilitation interventions, length of sickness absence, insurance and workers' compensation schemes along with broader social and labour market factors (Foreman et al, 2006; Lydell et al, 2007; Steenstra et al., 2017; Cochrane et al., 2017; Brendbekken et al., 2018; Amick et al., 2017) .

To develop on one of the above factors, Franche et al. (2005) recently reviewed quantitative studies of workplace based return to-work interventions. Their aim was to synthesise and assess the literature on return to-work interventions and strategies provided at the workplace for workers with a work disability due to musculoskeletal or other pain related conditions. Conclusions were based a smaller number of studies (10) that were ranked as high quality and showed consistent findings. These authors concluded that there was strong evidence that two factors, contact between health care provider and workplace, and work accommodation offers, significantly reduce work disability. This review also concluded that there was moderate evidence that early contact with the worker by the workplace, ergonomic site visits and the presence of a return-to-work coordinator also independently reduced the

time off work with the condition. Foreman et al (2006) completed a synthesis and provide in depth detail on how all the above factors have an influence on return to work. The author advises that this paper be referred to if further context is required as the scope to cover same was not possible by the author as it was not the focus of this thesis.

In light of multi-dimensional influencers on the return to work process, the rehabilitation of workers also must assume a multidimensional approach. The core objective of any form of rehabilitation is restoration of function (Nocon & Baldwin 1998; WHO 2001). Vocational rehabilitation (also called occupational rehabilitation or work rehabilitation) is directed specifically to employment outcomes. Perspectives on good practice for vocational rehabilitation when rehabilitating the worker have been depicted in Image A (NDA, 2016).

Image A: Perspectives on good aspects of Vocational Rehabilitation: adapted from International Good Practice in Vocational Rehabilitation: Lessons for Ireland (NDA, 2016)

Equitable access to services
Developing digital access to services
Making service available in all locations, to all citizens and through multiple channels
Ensuring the system works equally well for people with acquired disabilities as a result of illness as it does for people with injuries
Creating a continuum of services
Linking vocational rehabilitation to occupational health services
Viewing prevention as a continuum of interventions from primary health and safety to tertiary vocational rehabilitation
Finding ways to intervene early to prevent job loss and reduce the impact of impairments
Profiling client needs and strengths as a starting point for intervention
Provide follow up supports even after placement to employment including workplace adaptations
Engaging all actors in creating more responsive services
Actively involving service users in developing their own multidisciplinary plans and in evaluating services
The contribution of professional associations to improvements
Enabling the involvement of all stakeholders in the design, development and governance of the VR process
Working more closely with employers
Responding to and collaborating with employers as direct customers of the services
Building collaboration with employer organisations
Working with employers to create on-the-job training opportunities
Finding ways to incentivise employers to recruit and retain people with disabilities including quotas

1.5 Evidence for current work rehabilitation interventions

LBP and MSD's are no longer rigidly interpreted as purely structural, anatomical or biomechanical disorders. Instead, recent research has highlighted that MSD's are multidimensional disorders associated with a complex interaction of different factors across the biopsychosocial spectrum (Waddell 1996, O'Sullivan 2012). These include cognitive (e.g. poor self-efficacy, catastrophic thoughts, maladaptive beliefs, unhelpful expectations), psychological (e.g. depression, anxiety), social (e.g. interpersonal relationship stress, low job satisfaction) and physical (e.g. restricted and guarded movement patterns) factors (O'Sullivan 2012). These factors are regarded as catalysts for chronicity, owing to a resistance to recovery and prolonged disability in people with MSD's (Kendall 1999, van der Windt et al. 2007).

There is growing consensus in recent decades that whilst addressing the physical compromise of the injured worker is important, much of the variability in outcomes related to return to work interventions is influenced by what occurs at the workplace (Franche et al, 2005). Furthermore, there are growing calls for interventions that support the worker with their work participation rather than interventions coordinated outside of the workplace (Anema et al, 2004).

A qualitative study that explored the challenges perceived by GP's when managing and implementing sickness certification found that GP's are faced with a variety of challenges and lacked confidence in their role in providing appropriate deadlines and linking with employers due to a lack of feedback on the process from key stakeholders (Kiessling et al, 2012). The review concluded that regular education should be provided surrounding the competencies required for allied health professionals related to the identification and interaction with key stakeholders as well as increasing their related knowledge on existing social insurance policies. These competencies included education around the existing social insurance systems; how to conduct a workplace capacity assessment and how to best approach medical and non-medical stakeholders as appropriate as part of the RTW process (Kiessling et al, 2012).

This lack of knowledge and confidence expressed by GP's was echoed in the SWAP trial, a large scale RCT that explored the effectiveness of just giving advice related to work rehabilitation in primary care (Wynne-Jones et al, 2018). The trial identified that those recently out of work were most likely to benefit from timely education and suggested that the primary care setting may be best placed to facilitate same with the view to prevent work absenteeism and to encourage a timely return to work. Whilst there are existing guidelines in place to support primary care practitioners in providing appropriate advice and support about work (National Disability Authority (NDA), 2016), implementation of these amongst the medical professionals was seen to be variable. The authors emphasised the need for improvements in training and education about managing employee occupational health issues in primary care and that this should be coupled with provision of services to which patients with MSD's may be referred for advice and assistance about work (Wynne-Jones et al, 2018).

There are only a small number of quality workplace-based return to work (RTW) intervention studies that involve workers with MSD's or a pain-related condition. A systematic review conducted by Cullen et al, (2017) evaluated the evidence on the effectiveness of workplace-based RTW interventions that assist workers with musculoskeletal and pain-related conditions with RTW. The authors identified multidimensional intervention categories across three differing domains and these included: health-focused, service coordination, and work modification interventions. Examples of what constitutes each of these interventions are detailed in Figure 1. There was strong evidence that work absenteeism rates related to both MSD's and pain-related conditions were significantly reduced when multi-domain interventions were implemented that encompassed at least two of the three domains (Cullen et al., 2017). The findings in this study echo the sentiments of the systems encircling the worker as described by Loisel and Colleagues (2005). The authors of the review recommend implementing multi-domain interventions (i.e. with healthcare provision, service coordination, and work accommodation components) to best facilitate workers and help reduce lost working time (Cullen et al., 2017).

A review of the effectiveness of early multidisciplinary interventions in promoting work participation and reducing work absence in adults with regional MSK pain concluded that there remains uncertainty as to the effectiveness of early multidisciplinary interventions for this population (Cochrane et al., 2017).

More recently, in a realist review conducted by Durand and colleagues (2018) of workplace intervention programmes for those with MSD's, it was shown that rehabilitation programs yield positive RTW outcomes for various types of workers (manual or sedentary), regardless of MSD site or phase. It was deemed from the review that the rehabilitation programs were successful when they comprised of the following domains; assessment of the individual, including the work situation; timeliness of workplace intervention; a diversity of stakeholders; intersectoral information sharing n workplace accommodations. It was emphasised by the author that effective rehabilitation programmes largely depend on strong intersectoral actions involved leadership shared amongst healthcare, workplace and insurance stakeholders (Durand et al, 2018).

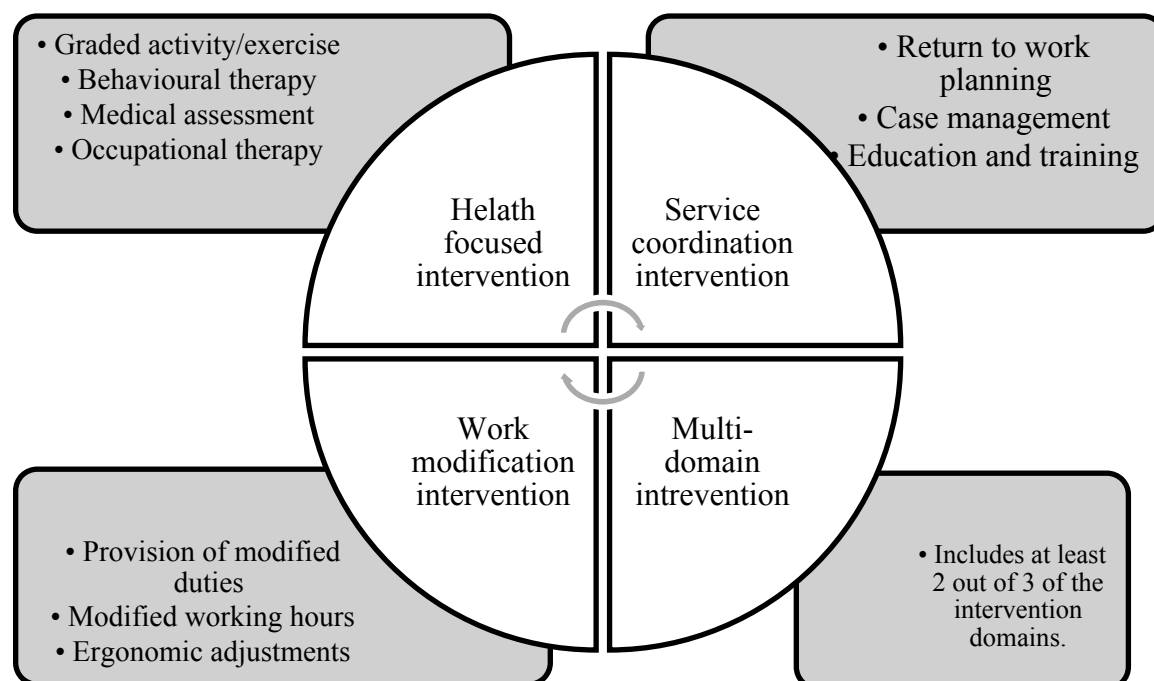


Figure 2: Work related interventions explained (Cullen et al, 2017)

An earlier review of the effectiveness of interventions to reduce sickness absence and job loss in workers with MSD's in community and workplace settings (Palmer et al 2012) identified no one clearly superior intervention. Interventions included behavioral change techniques, exercise therapy, workplace adaptations and provision of additional services. As benefits within this review were small and the cost-effectiveness of such interventions were unclear, the authors advised that employers' practice should be guided by the value judgements of the employee and in liaison with the employee. To date, there has been little qualitative research conducted to explore employers confidence to initiate such work adaptations to best support the employee in work (Palmer et al 2012).

In consideration of the above interventions described, and the variability in efficiency of outcome, of note, there is strong evidence to support the role of consistent communication and cooperation between rehabilitation stakeholders. An agreed goal is suggested as being central for improvements in clinical and occupational outcomes for the worker and a multi-stakeholder, multi- intervention approach (Franche and Krause, 2002). Relative to this thesis, gaining perceptions from multiple stakeholders involved in the return to work process may serve to highlight as to whether the stakeholders are communicating and interacting as the above research suggests in the Irish context.

1.6 Existing Vocational Rehabilitation Practices in Ireland

The primary actors relative to vocational and occupational rehabilitation in Ireland at present consist of the Departments of Health, Social Protection, Education and Skills and Jobs, Enterprise and Innovation and Citizens Information. The below information is adapted from the 'International Good Practice in Vocational Rehabilitation, Lessons for Ireland'. National Disability Authority, Work Research Centre (McAnaney and Wynne, 2016)

At present, occupational rehabilitation is available in Ireland through a number of large public and private sector organisations and through private insurance providers of income protection and personal health insurance. Services are provided by a mix of in-company professionals and private sector providers. However, there is no standard model of provision of occupational rehabilitation services.

The public sector approach to management of employee ill health or disability is consistent with good international practice. Within existing practices, the return to work process is often initiated by the completion of a functional capacity form by a medical professional. This can lead to a referral to the rehabilitation programme and the development of a rehabilitation and return-to work plan which addresses objectives, restricted duties, hours of work and interventions and time frames. Additional services can be provided where return-to work milestones have not been met. The process is concluded when the employee returns to his or her original job, is deemed not to be benefitting further from the interventions or fails to cooperate. Where a return to the original job is not an option, alternative arrangements can include retraining, redeployment, and access to income protection or retirement on ill health grounds.

For employees within the private sector in Ireland at present employers also offer similar employee benefits which are often delivered under contract by private specialist providers. These providers also operate on behalf of insurance providers. Services available include:

- Work capacity evaluation
- Functional capacity evaluation
- Worksite evaluation
- Ergonomics
- Vocational redirection evaluation
- Transferrable skills analysis and return to work case management.

A number of limitations exist within the Irish approach to vocational rehabilitation despite the above practices when compared with international research. A significant factor in this, particularly as it relates to vocational rehabilitation and early intervention in Ireland, is that the majority of employment related services require a person to be unemployed or inactive.

Access to supports

No systematic access to functional capacity evaluation, psychological supports or physical functional capacity building. Furthermore, there is no general facility for people, whether seeking employment or trying to return to a job, to access functional capacity evaluation, psychological supports or physical/functional capacity building as part of their rehabilitation plan. The presence of these

elements in almost all other jurisdictions is an indication of the importance of its absence in the Irish context.

Referral pathways

No systematic structured pathways to timely VR A further weakness of the Irish system is that, even if many system elements are present, there is no systematically structured approach to ensure that people access VR in a timely manner. In effect, the Irish social protection system is mostly passive in its response to people while they are employed. Apart from a number of pilot projects on active inclusion and early intervention, no coherent policy exists within the current Irish structure. Furthermore, no formal links exist between the health system and the limited VR-type services for which employed people are eligible.

No case-management system to co-ordinate different supports from different providers

Another weakness of the Irish system is that no formal support (case management) is available in the wider system to coordinate interventions and supports from different providers and social protection. This is the case even though people may be provided with an individual plan and a key worker within a specific service.

1.7 Thesis Aims and Objectives

Recent research (Durand et al, 2018) has emphasised that if and when exploring return to work processes or interventions, a multistakeholder approach should be encouraged as outcomes of such interventions often largely depend on strong intersectoral actions shared among healthcare, workplace and insurance stakeholders. The complexity of such a process is highlighted and the interplay of players underlined (Durand et al, 2018).

The research objectives for this study, as described below, directly parallel with those of the Comprehensive Employment Strategy for People with Disabilities (2015-2024) recently launched by the Irish Government. The research conducted as part of this thesis may lead to a deeper understanding

of how to best support people with MSDs in employment, with the view to create accessible research describing the needs and perceptions of people working with MSDs and/or managing those with MSDs in Ireland.

Thus, the research aims guiding this thesis were:

- To synthesise the available qualitative literature on the the experience of workforce participation amongst workers with low back pain (LBP) and the barriers and enablers of same.
- To examine the experiences of people with musculoskeletal disorders (MSDs), employers, health professionals and other key stakeholders involved in the return to work process to explore their experiences of work rehabilitation and retention.

The research conducted as part of this thesis is presented in journal article/research paper format within chapters 2 and 3 with same fulfilling the thesis aims as detailed above. A literature review and discussion of each study is presented as part of chapters 2 and 3. The article based format in chapter 2 and 3 is preceded by a general introduction to the research topic and is followed with a rounding discussion.

Chapter *one* of thesis provides an overview of the context of MSD's both within the Irish and international context and details how work participation is affected in light of an MSD for many workers and/or those with a disability. The existing quantitative research relative to the enablers and disablers of work participation as well as existing evidence for interventions are discussed and helped informed the qualitative exploration as part of this thesis.

Chapter *two* is a meta-ethnographic synthesis of the qualitative literature related to the work participation experiences of people with LBP.

Chapter *three* presents a qualitative interview study with key stakeholders in the work rehabilitation process, including people with MSD's, employers and health care professionals (HCP's). Their experiences related to the retention and return of work are explored in depth through semi-structured interviews analysed thematically and findings are presented and discussed in this chapter in journal article format.

Chapter *four* comprises a rounding discussion of the main discussion points extracted from the synthesis and original research piece and presents implications for clinical practice and research to improve the management and available knowledge related to those working with an MSD in Ireland.

Chapter 2: Exploring the work related experiences of those with LBP: a qualitative synthesis

Authors:

Aoife Synnott, Kieran O’Sullivan, Orla Muldoon, Katie Robinson

2.1 Abstract:

Background: Musculoskeletal disorders (MSD's) are a leading cause of work disability. To date, the link between musculoskeletal disorders, low back pain (LBP) included, and the labour market has been underappreciated and understudied. Whilst there is good evidence to support the role of work in LBP recovery, little is known about the perceptions or experiences of employees that continue to work in light of LBP.

Objectives: To identify and synthesise the available qualitative research on the employment- based experiences of people with LBP.

Methods: Eleven databases (Academic Search Complete, AMED, Biomedical Reference Collection, CINAHL, Medline, PyschArticles, PsychInfo, SportDiscus, Social Sciences, UK and Ireland Reference Centre, Scopus and Web of Science) were searched between January 2018 and March 2018 using three groups of key words; qualitative research methodologies, work, and musculoskeletal conditions. Two reviewers independently assessed the methodological quality of included papers. Concepts from each study were translated into each other to form categories, which were then combined through a “line – of - argument” synthesis.

Results: Fifteen papers were included. Seven main themes were identified. These synthesised themes highlight that individuals with LBP largely feel unsupported at work. Workers with LBP described engaging in strategies to remain working without actively seeking support from those around them. This behaviour was often practiced by workers due to a perceived sense of judgement confounded by

a lack of understanding about LBP. Where help was offered, this was largely in a format that served to ease biomedical aspects related to LBP such as easing physical loads related to the work task. Rarely were psychosocial dimensions of pain addressed or considered by the employer as perceived by employees in pain. Similarly, workers with LBP often focused on the biomedical limitations and implications relative to their pain.

Conclusions: Employees with LBP report feeling largely unsupported with regard to enabling and maintaining work participation. The practice of both rehabilitation professionals and employers may be overly focused on symptoms related to LBP and physical aspects of work tasks rather than the emotional well-being and coping skills of the employee with LBP.

2.2 Introduction

Musculoskeletal pain, notably low back pain (LBP), remains the leading cause of work disability amongst the working population (McBeth 2007). Whilst most return to work after an acute episode of LBP, the rates of reoccurrence remain high (Coole et al 2010; Marras et al, 2007), thus leading to major costs within western society for compensation for work loss such as sick days and early retirement (Nachemson et al, 2000).

To date, the link between musculoskeletal disorders, LBP included, and the labour market has been underappreciated and understudied (Summer et al, 2015). It is often assumed that musculoskeletal disorders have an impact only on older, non-working age cohorts. However, research has shown this is not the case and although older age groups have higher incidences of musculoskeletal disorders, significant numbers (>30%) of the working age population are affected (Waddell and Burton, 2006).

LBP is no longer accurately viewed as purely a structural or biomechanical disorder. Instead, research has highlighted that LBP is a complex disorder which can be influenced by a wide range of factors (O'Sullivan, 2012). Factors such as perceived work capacity, psychosocial support in the work environment and the availability of modified duties are predictive of RTW, highlighting that the

capacity to assume or resume employment is multifactorial (Steenstra et al, 2017; Rashid et al, 2017). While many with LBP can continue to work full time (Long et al, 1996; Leclerc et al, 2016), for others LBP can limit physical capacity for work, as well as negatively impacting productivity and creating a strain amongst colleagues and superiors (Dembe, A.E, 2001; Marras et al, 2007).

There is good evidence to support the role of work in LBP recovery (Fritz et al, 2001). However, little is known about the perceptions of employees with LBP on the role of work in rehabilitation and recovery. Most qualitative research to date has been focused on the barriers to return to work (Magnussen et al, 2007; Patel et al, 2007) rather than the experience of those who remain in work. Therefore there is much to learn about the strategies used, and surrounding supports, that enable continued participation in work.

This review used a meta-ethnographic approach to integrate qualitative research findings to address the research question: what are the employment based experiences of workers with LBP? Meta-ethnography, the most frequent used qualitative synthesis approach in health research is an interpretive inductive approach that aims to increase conceptual understanding of the topic being studied (Toye et al, 2013). Synthesising qualitative studies on the employment based experiences of people with LBP who remain in work may serve to facilitate improved employer and rehabilitation therapists' policies and strategies to promote self-management in the workplace.

2.3 Method

2.3.1 Identification and selection of studies

This review has been reported in line with the ENhancing Transparency in REporting the synthesis of Qualitative research (ENTREQ) guidelines (Tong et al 2012) and was registered on the PROSPERO database of systematic reviews on commencement of data collection (Prospero reg: *CRD42016035999*). Specific guidelines relative to the reporting of the synthesis of meta-ethnography are yet to be finalised (France et al 2015). The databases Academic Search Complete, AMED,

Biomedical Reference Collection, CINAHL, Medline, PyschArticles, PsychInfo, SportDiscus, Social Sciences, UK and Ireland Reference Centre, Scopus and Web of Science were searched between January 2018 and March 2018 by two independent reviewers.

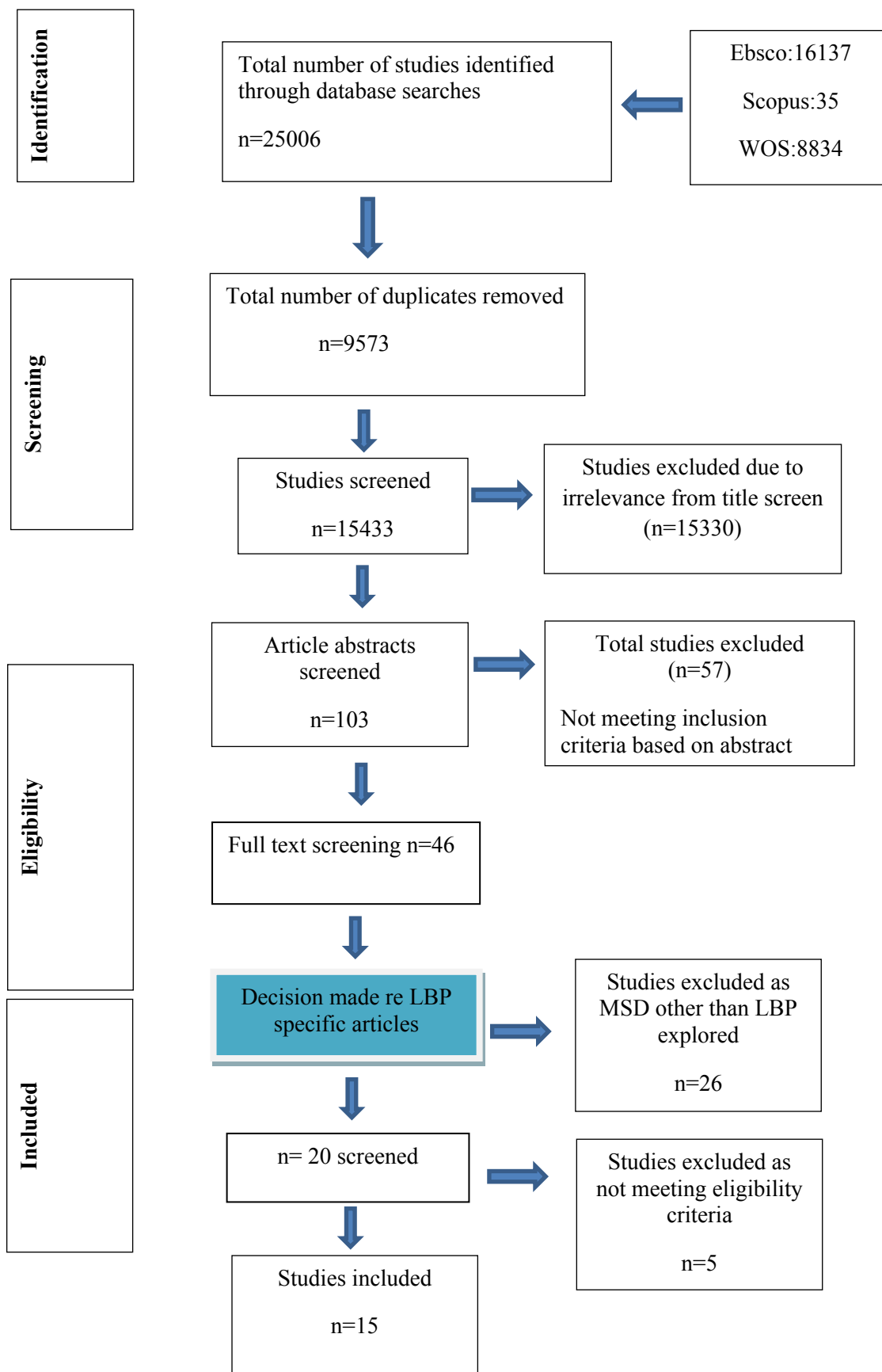
The search strategy was developed by the authors and key words were compiled based on systematic searches of key words used within systematic reviews used in this area. The Cochrane back review strategy informed the search items relative to LBP (Heymans et al 2005). The strategy used three groups of key words to ensure that the selected studies included: qualitative research methodologies, work, and musculoskeletal conditions as the conditions of interest. The full search strategy can be viewed in Appendix 1.

The search was limited to English-language papers involving humans, and year limiters from 1980-2018 were applied. Both titles and abstracts were screened by two independent reviewers. Full text versions of potentially eligible articles were retrieved and manual searches of reference lists of the shortlisted articles were also performed by two independent reviewers.

Studies included were required to have report qualitative data collection and qualitative analysis. Mixed-method studies were eligible only if the qualitative data was analysed separately to the quantitative data. Of note, within the search terms (Appendix 1) a range of musculoskeletal conditions were included, inclusive of arthritis, fibromyalgia and LBP. At article review stage, a decision was made by the research team to include only studies of people with LBP conditions. This decision was made as a recently published qualitative synthesis by Toye and colleagues (2016) had explored the experience of work amongst people with chronic musculoskeletal pain with a database search until February 2012. Studies included were required to investigate patient's perceptions of their employment based experiences of working with LBP, even if they were on sick leave from work, in receipt of disability payment or retired with pension at the time of data collection. Therefore studies must have explored the experiences of those who had some period of time with LBP at work to be eligible. Qualitative studies in which employment based experiences of the patient were not explored

and that solely discussed patient perceptions of sickness absence or the return to work process were excluded. The list of full eligibility criteria can be viewed in Appendix 1. A flow chart of study selection procedure is detailed in Figure 2.

Figure 3: Adapted Prisma Diagram



2.3.2 Assessment of characteristics of studies

Prior to synthesis, the methodological rigour of the included studies was assessed using the questions developed by the Critical Skills Appraisal Programme (CASP), which has been used extensively for appraising the quality of studies for meta-ethnography (Toye et al 2014). As was performed by Toye et al (2014) previously, a numerical score was assigned to each question to indicate as to whether the CASP criteria had **(1)** not been addressed), **(2)** been partially addressed and **(3)** been extensively addressed within the study. This then gave a score range of 10-30 across the 10 items. Two authors independently appraised the articles and applied a totalled score. Both authors then met to come to consensus regarding the final quality appraisal score. If consensus could not be reached, an independent reviewer was involved. The trustworthiness criteria evaluated within the CASP tool and the collaborative quality score assigned by team members have been detailed in Table 1. Articles were not excluded on the basis of their CASP score (Campbell et al 2011).

Table 1: Quality appraisal of included articles

Study Name:	Criterion 1 (1-3)	Criterion 2 (1-3)	Criterion 3 (1-3)	Criterion 4 (1-3)	Criterion 5 (1-3)	Criterion 6 (1-3)	Criterion 7 (1-3)	Criterion 8 (1-3)	Criterion 9 (1-3)	Criterion 10 (1-3)		
CASP CRITERIA	Clear Statement of Aim	Qualitative methodology Appropriate?	Appropriate Research Design	Sampling	Data Collection	Researcher Reflexivity	Ethical Consideration	Appropriate Data Analysis	Clear Statement of Findings	Research Value	Total Score (/30)	Mean/SD
Brooks et al 2013	3	3	2	3	3	1	3	2	2	3	25	2.5/0.71
Coole et al 2010 (a)	3	3	2	3	2	1	3	2	2	2	23	2.3/0.67
Coole et al 2010 (b)	3	3	2	2	2	1	3	2	2	2	22	2.2/0.63
Dean and Hudson 2011	3	3	3	2	2	1	3	2	2	3	24	2.4/0.70
DeSouza and Frank 2011	3	3	2	3	2	1	2	2	2	2	22	2.2/0.63
Dionne et al 2013	3	3	2	3	2	3	3	2	2	2	25	2.5/0.53
Frederiksen et al 2015	3	3	2	3	2	3	3	2	2	2	25	2.5/0.53
Magnussen et al 2007	3	2	3	3	2	2	1	2	2	3	23	2.3/0.67
Ryan et al 2014	3	3	3	2	2	2	3	3	2	3	26	2.6/0.52

Shaw and Huang 2005	3	3	2	3	2	2	2	2	2	3	24	2.4/0.52
Slade et al 2009	3	3	3	2	2	2	3	2	2	2	24	2.4/0.52
Soeker et al 2008	3	3	3	2	2	3	3	2	3	2	26	2.6/0.52
Tveito et al 2010	3	3	3	2	2	1	3	2	2	3	24	2.4/0.70
Walker et al 2006	3	3	2	2	2	1	2	2	2	2	21	2.1/0.57
Young et al 2011	3	3	2	2	2	2	2	2	2	3	23	2.3/0.48

Scoring: 1= criteria not addressed; 2= criteria partially addressed; 3= criteria extensively addressed

2.3.3 Data Extraction and Synthesis

The data was extracted using a purpose-designed format to provide context for the interpretations of studies and included: characteristics of the participants, work environment, current employment status at interview, theoretical perspective and the methodology employed in each of the studies (Table 2).

A meta-ethnographic approach was employed to synthesise data collected. Meta-ethnography is an inductive approach that facilitates the organisation of author ideas into a collective conceptual model encompassing a single clear message (Toye 2016). In line with the process followed within Toye et al (2014) only clearly articulated second order constructs formed the basis of the synthesis. Second order constructs refer to the researchers or authors interpretations based on participant's data collected (Schutz, 1962). Throughout, the analysis was guided by four distinct phases: reading the studies; determining how studies were related; translating the studies into one another and synthesising the translations.

Initially, two team members read included papers several times in full to identify and describe their interpretation of each construct. Both authors then discussed collected constructs and developed a collaborative interpretation of each concept. If a team member agreed there was no clear concept articulated from the second order constructs collated, it was deemed untranslatable and thus excluded. Second order constructs discussing the return to work process or experiences during time spent out of work were excluded. In using this process, an inventory of concise second order constructs was compiled.

In order to explore how the compiled second order constructs were related, the constant comparative method was employed (Charmaz 2006). Due to the number of studies included, the process was performed manually with pen, paper and scissors and the use of NVivo software was not required. Two authors organised second order constructs through constant comparison into piles with shared meaning. In some instances there were shared constructs amongst the piles. Individual team members then drafted a descriptive sentence to summarise the collected piles of second order constructs which

collaboratively formed a clear conceptual category. The tabulated format (as previously implemented by Malpass et al, (2009) of the manual piles created of the second order constructs which informed the conceptual categories is detailed in Table 3a and 3b.

The second order constructs and associated categories formed the basis of the line of argument, creating an overarching representation of the employment based experiences of those with LBP. Throughout, the synthesis process was inductive and involved constant reflective discussion amongst authors to decipher the line of agreement amongst the collected second order constructs.

Table 2: Data extraction of included studies

Author	Population	Country	Sample Size (n=)	Male (n=)	Age (Mean)/ Range	Current or previous workplace setting	Duration of Symptoms mean/ (range)	Work status at interview	Data collection	Methodology
Brooks et al 2013	Patients with LBP > 12 weeks recruited from pain management clinic	England	9	3	(49.2)/45-52 (working population) (57)/51-63 (non-working)	Service industry n=7 Managerial role n=2	8.2 yrs	Employed n= 5 Non employed due to LBP n=4	Semi structured interview	Thematic analysis
Coole et al 2010 (a)	Workers with LBP referred for rehabilitation	England	25	12	(44.7)/22-58	Large industry n=20 Small industry n=3 Self-employed n=2	6.8 years/ (3mths- 35 years)	At work n=19 Off sick n=6	Semi-structured interviews	Thematic analysis
Coole et al 2010 (b)	Workers with LBP referred for rehabilitation	England	25	12	44.7	Large industry n=20 Small industry n=3 Self-employed n=2	6.8 years/ (3mths- 35 years)	At work n=19 Off sick n=6	Semi-structured interviews	Thematic analysis
Dean and Hudson 2011	Rural farm workers with LBP	New Zealand	33	27	27-61	Farm based work	16.9 years	At work n=33	Semi-structured interviews	Interpretive Phenomenological Analysis
DeSouza and Frank 2011	Individuals with chronic spinal pain referred to a rheumatology outpatient clinic	England	11	5	(49.3)/27-79	Self-employed n=1 Manual work n=1 Service industry n=9	16.8 mths/ (1-96 mths)	At work n=1 Unemployed n=2 Sick leave n=1 Unable to work n=2 Retired n=2 Now a Housewife n=3	Unstructured , in-depth interviews using the 'Framework' approach	Thematic content analysis
Dionne et al 2013	Workers with work disabling back pain Returned to work n= 9 Not returned to work n=10	Canada	19	14	30-60	Manual work n=11 Service job n=8	<1 year n= 4 2-5 yrs n= 5 5-9 yrs n= 2 10+ yrs n= 8	At work n=12 Do not work n= 7	Focus groups	Thematic analysis
Frederiksen et al 2015	Workers with LBP that had attended	Denmark	20	15	53.5 years	Primarily physical work n=17	Participants must have	At work n=20	Focus groups	Thematic analysis

	LBP lectures run by study coordinators					Equally physical/sedentary work n=3	reported LBP at least once during the 1 year follow up period			
Magnussen et al 2007	Disability pensioners with LBP	Norway	17	5	38-56	N/A	Undisclosed	Disability pension n=7	Focus groups	Thematic analysis
Ryan et al 2014	University employed staff who had been off work for two weeks of more as a result of LBP in the last two years	England	5	0	Undisclosed	Office based work/teaching n=5	(2 weeks-6mths)	At work n=5	Semi-structured interviews	Interpretive Phenomenological Analysis
Shaw and Huang 2005	Individual out of work due to LBP > 1 week referred by physiotherapist from a collaborating occupational health network	USA	23	11	18-65	Undisclosed	1.1yrs/ (1mth-3yrs)	Out of work n=23	Semi-structured interviews	Content analysis
Slade et al 2009	Individuals that had participated in an exercise programme for NSCLBP	Australia	18	6	(51.2)/26-64	Undisclosed	20.3/ (1-42yrs)	Undisclosed	Focus groups	Grounded Theory
Soeker et al 2008	Workers with a diagnosis of back pain referred for rehabilitation	South Africa	26	18	37.3	Blue collar employment n=23 Skilled employment n=3	Duration not recorded	At work n=13 Off sick n=13	Focus groups	Thematic analysis

Tveito et al 2010	Full or part-time workers (≥ 20 hours a week with episodic or recurrent LBP)	USA	38	12	(49)/ 23-66	Focus group a: office workers Focus group b: manual labourers Focus group c and d: mixed occupations Focus group e: self- employed	Duration not recorded	At work n=38	Focus groups	Grounded theory
Walker et al 2006	Individuals with LBP attending a pain clinic	England	20	12	(56) / 28-79	Undisclosed	8yrs/ (2-50yrs)	Undisclosed	In-depth interviews	Interpretive Phenomenological Analysis
Young et al 2011	Individuals with LBP that took a period off of work because of pain within the last year	USA	31	17	20-60	Labourers n= 11 Professionals n= 8 Student n= 6	(18mths-30 years)	At work n= 25 Off sick= 6	Focus groups	Thematic analysis

2.3.4 Trustworthiness of Results

The methodological quality of the included studies is detailed in Table 1. As previously stated, articles were not excluded on the basis of their CASP scoring, however emphasis was placed on the reflective account of the research process of the author so that the concepts for inclusion had capacity to facilitate appropriate theoretical insight (Toye et al 2013). This was achieved in all eligible studies as all clearly described the methods of data collection. The overall quality of the studies was good, with most scoring greater than 25/30 on the applied scoring interpretation. Throughout, the reporting of ethical considerations and the researchers influence on the data collected were inconsistent.

2.4 Findings

2.4.1 Study identification and description

The identification and selection of studies for analysis is summarised in Figure 1. In total, 25,066 articles were found in the databases. After 9573 duplicates were removed, 15433 titles and abstracts were screened. Twenty two articles were retrieved with seven articles being excluded as they did not fulfil the inclusion criteria. Fifteen articles in total were included in the metasynthesis. Eight studies were conducted in Europe (*Brooks et al, 2013; Coole et al, 2010 (a)(b); DeSouza and Frank, 2011; Frederiksen et al 2015 ;Magnussen et al,2007; Ryan et al,2014; Walker et al, 2006*) three in the United States of America (*Shaw and Huang 2003; Tveito et al, 2010; Young et al, 2011*), one in New Zealand (*Dean and Hudson, 2011*), one in Australia (*Slade et al,2009*), one in Canada (*Dionne et al, 2013*) and one in South Africa (*Soeker et al, 2008*). Six of the included studies used individual semi-structured interviews as the main format for data collection (*Brooks et al 2013; Coole et al 2010(a)(b); Dean and Hudson, 2011; Ryan et al 2014; Shaw and Huang, 2005*), with most others used focus groups. A total of 320 participants were interviewed in the fifteen included studies. In fourteen of the fifteen studies, both male and female participants were recruited, with only one study (*Ryan et al 2014*) reporting the experiences of all female employees. Participants were recruited from a variety of settings; three studies recruited from pain management clinics, whilst six studies had recruited from

clients engaging in some form of rehabilitative intervention whether it be exercise, education or a combined programme. The remaining were recruited through purposeful sampling and associated advertising. Most studies included employees from varying work environments such as manual labourers and service workers, working within both small scale and large scale industries. One study (Dean and Hudson, 2011) focused solely on those involved in farm-based work and those participating were mostly self-employed, such that availability of employer supports were not relevant in this setting. Participants in the other 14 studies comprised a mix of people in employment, people currently unemployed secondary to LBP associated disability or people on sick leave secondary to LBP. Within only four of the included studies (Dean and Hudson, 2011; Frederiksen et al 2015; Ryan et al 2014; Tveito et al 2010) were all of the participants recruited engaging in paid work at the time of data collection. The characteristics of the studies as described in brief above are summarised in Table 2.

2.4.2 Key concepts:

The authors developed the following seven conceptual categories from our analysis of the 15 primary studies. 1. Employees are stoic and continue working despite beliefs that work causes and/or exacerbates pain. 2. Self-management allows employees to work despite pain. 3. Colleagues- a help or a hindrance with LBP? 4. Employer support of work participation. 5. Perceptions of occupational health and absence management policies and procedures. 6. Workers dread of disclosure, discrimination and doubt of others. 7. The emotional experience of the employee in pain. Each conceptual category is supported by author team interpretations (second order constructs) from primary studies. A full collated list of the second order constructs are detailed in tables 3a and 3b for ease of viewing and evidence of extraction. Selections of first order participant quotations are detailed below within the description of the results to support the author interpretation.

Concept 1: Employees are stoic and continue working despite beliefs that work causes and/ or exacerbates back pain

This concept describes workers' beliefs that monotonous and physically demanding work tasks and unsafe, demanding work environments are a cause of, and contributor to, their LBP. Many considered a work related injury as the cause of their pain, while for others; work was seen to exacerbate pain associated with an injury sustained outside of working hours. Despite LBP being attributed to working conditions such as heavy lifting, poor manual handling techniques and unrealistic productivity demands, workers described ignoring pain and working despite pain to uphold their status as a 'good', efficient employee. Continuing to work was described as a distraction from pain by workers within one study (Brooks et al; 2013).

"I often had to serve the customers while being alone in the shop. I had to lift heavy boxes filled with vegetables, potatoes and so on, over and over again. I said I cannot do this alone, but it seemed impossible to get any help" (Magnussen et al, 2007)

"I was working at the time when nurses were basically cannon fodder anyway and there was very little effort to protect backs and so forth. It was matter of "pick them up and move them" and since then...from that time I hurt my back while I was nursing and continued having back pain on and off ever since" Soeker et al (2008)

"I was on my knees still contributing to work when I knew I wasn't fit..." Ryan et al (2014)

Concept 2: Self-management allows employees to work despite pain

This concept describes the strategies that workers implemented to continue working despite LBP. Employees who remained in work despite LBP, or successfully returned to work after a LBP episode, emphasised their role in seeking out information and/or taking appropriate action to recover in order to continue working. . A broad range of self-management strategies were described, some were self-

initiated while others require the support of the employer/colleagues. The reported self-management strategies included: pacing, self-monitoring of physical demands, stretches, task modification, and the use of equipment. Having autonomy to initiate and problem solve self-management strategies within the workplace with employer support, was described as a primary facilitator in enabling continued participation at work in some cases.

“I’ll take breaks when I’m tired...I’ll use proper lifting techniques and stretch in the mornings”

Shaw and Huang (2005)

“Lifting sheep is something that can cause problems, but you’ve just got to be careful, and lift them as little as possible, and slide them round, is what I do “. Dean and Hudson (2011)

“Freedom with responsibility is really important! It means that our employers allow us to mind our own business. We have a piece of work to do, and they have the confidence in us to do it the way we want to” Frederiksen et al (2015)

Concept 3: Colleagues- a help or a hindrance for workers with LBP?

The influence of colleagues on employees’ experiences of working with LBP varied. Relationships with colleagues were described as both negative and positive. Positive supports enabled by colleagues included; assistance with tasks, support meetings and collegial understanding of the pathology. Communication and honesty regarding the employees’ capacity to complete work tasks was reported to facilitate collegial support. In cases where communication was hindered, employees described that colleagues questioned the true capacities of the worker and often resented if special dispensations were made for the employee in pain. Due to the invisibility of LBP, employees were often expected to complete work tasks which they believed were beyond their physical capacity due to pressure from colleagues. An overall sense of judgement from colleagues was described by the employees in instances in which communication was hindered and most perceived this to stem from their colleagues lack of empathy and understanding about LBP.

“My close work mates know me well. If I start to slop around and begin to tighten the strings, they know that it usually has to do with my back. And I know that if I say something, then they’ll offer to switch positions so I don’t bust my back” (Frederiksen et al (2015)

“But even your people that work with you, oh we don’t need you; you’ve got the crook back. I’d say, let me have a go, if I’m in trouble get someone else, but oh, you’re the one that’s got the crook back, don’t you do it. So, you’re tagged all the time, yeah, it’s a real problem” Slade et al (2009)

Concept 4: Employer support of work participation

This concept describes how employers can either support work participation and contribute to a positive employee experience at work, or quite the opposite. In the included studies, most reported an overall positive relationship and good relations with the line manager and employer flexibility about work adaptations, which in turn fostered motivation to continue working amongst employees.

On the contrary, a less commonly reported experience was an unsupportive employer. Unsupportive employer were described as lacking understanding of LBP and in some cases questioning the validity of the employee’s reduced work capacity. In reports of unsupportive employers if and when modifications were implemented by employers, they were often perceived to be overly cautious due to poor understanding of pain and subsequently these modifications instilled a fear of re-injury at work. Workers also at times questioned the sincerity of the employer when work modifications were initiated at work, particularly in case of a work- related injury. This lack of understanding and support often culminated in the deterioration of employee- employer relations.. In addition, the work environment was implicated as working in a small firm with a smaller number of colleagues made informal requests for modifications more difficult.

Across the included studies employer-employee relationship varied. Employee perceptions regarding the degree of support offered by the employer may be influenced by their current employment status. Whilst the data extracted focuses on time in employment with LBP, the employment status on

reflection is notable. A specific example of this is evident within two of the included studies (Brooks et al, 2013; Dionne et al 2013). In these two studies those currently out of work at the time of data collection reported significant fear-avoidant behaviours due to the belief that any kind of activity would exacerbate their condition whereas those in employment at data collection stage reported an attitude of self-help evidenced by their., active participation in negotiating with employers and having an understanding of their rights and employer responsibilities.

My immediate line manager is very supportive and the guy that was my boss at the time I started this was extremely supportive. It tends to be the ones above, you know the next line up, they're not that supportive, it's like ,Yeah, whatever'" Brooks et al, (2013)

"So from my side I would like to say that it would have been nice if bosses or directors on a high level become more informed about our problems." Soeker et al (2008)

Concept 5: For the good of the worker or the workplace: Perceptions of occupational health and absence management policies and procedures.

In the majority of included studies, occupational health policies and absence management policies in place within the work environment were primarily described as unhelpful and not supportive of the employee. Many employees were unaware of the role of occupational health within the workplace and therefore perceived it as a service that favoured the employer above the employee. Included studies described how employees often failed to engage with occupational health due to a sense of intimidation, and feared taking sick leave secondary to the fear of punishment (including fear of dismissal and disciplinary measures).

"I am worried- because I don't have a lot of time off, and I know people that have been off for a long time, even gone into hospital and had an operation, and they're cautioned going back- and I don't really want that on my record. D'you know what I mean?" Coole et al (b) (2010)

“I have to take time off because of my pain and then you’re not considered a person who comes in all the time so, therefore, you may get your walking papers...they don’t run a charity”. (Young et al, 2011)

Concept 6: Workers’ dread of disclosure, discrimination and the doubts of others

Employees described feelings of stigmatisation and discrimination resulting from how others in the workplace perceived them as an employee with LBP. Decisions about disclosure were influenced by the employees’ perceptions of the attitudes and beliefs of others. Fear of disclosure stemmed from the threat of losing their status as a worker, and fear that employers would perceive them as inconvenient and inefficient and consequently both replaceable and dispensable. When colleagues or employers did not understand or have empathy for the gravity of the employees’ pain, they communicated suspicion and doubt regarding the workers entitlement for adaptations. Consequently, employees with LBP describe ‘managing’ the perceptions of others through concealment and legitimising pain through sick note provision with the view of validating their pain.

“It is one of those difficult things, I suppose, back pain is sort of like stress, when you receive phone calls from people who are off with back pain, or stress, kind of raises the eye lids with oh gosh, we have got another one off Monday morning...it is a believability thing” Ryan et al (2014)

“I don’t report my problem because the boss doesn’t want to hear about it, he appeals everything. So I use my days off to get some rest once in a while” Dionne et al (2013)

“I still believe there’s a big stigma that when you say oh gee , my back’s sore, people look at it as a way, oh they want to get out of work, and sometimes it’s just easier not to say and keep working” Slade et al (2009)

Concept 7: The emotional experience of the employee in pain (feeling worried, guilty and under scrutiny)

This concept encapsulates the overwhelmingly negative emotional experiences associated with working with LBP as described in these studies. These negative emotional experiences often stemmed from a sense of being judged and a lack of perceived support as described within previous concepts. Workers report feelings of fear, anxiety and guilt throughout the studies. The unpredictability of symptoms and fear of progression was reported by some participants to fuel fear about their future work capacity. Attempting to conceal symptoms from colleagues and employers and continuing to work despite pain often resulted in knock-on negative effects on employees' lives outside work such as reduced participation in social activities.

“What it comes down to is self-worth, because your confidence completely goes...once that circle starts, it is just a down-ward spiral. It is very, very hard to come out of that...I am still the same person, but people don't see that” Walker et al (2006)

‘I don't do much for family any more, visit friends, you know, calls for dinner. I've kinda [sic] given up on the social aspect of my life . . . I just go to work, that's it’ Tveito et al (2010)

‘I think if you are in pain it is hard to get along with anyone including yourself.’ ‘I am always getting counselled about my lack of patience, cause I get really cranky Tveito et al (2010)

2.4.3 Line of argument

A line of argument was achieved when the identified seven concepts were considered together and a core concept was identified which enabled fuller insight into the experiences of employees with LBP.

The core concept identified is that employees with LBP engage in ongoing, frequently invisible, efforts in the workplace to manage their LBP and continue to work despite pain. These efforts include self-management strategies used to manage pain and strategies employed to manage interactions with, and the response of others, in the workplace (colleagues, employers and occupational health professionals).

The work-related experiences of participants across the 15 included studies were dominated by the response of others in the workplace to their LBP. Participants highlighted the challenge they face when

others in the workplace doubted the reality of their LBP. Employees report feeling largely unsupported whilst carrying this additional burden. Good communication and understanding amongst employers and colleagues were emphasised as integral strategies that could and should be adopted in the workplace to support the employee in pain.

Table 3a: Concept extraction

Concept	Brooks et al 2013	Coole et al 2010 (a)	Coole et al 2010 (b)	Dean and Hudson 2011	De Souza and Frank 2011	Dionne et al 2013	Frederiksen et al 2015	Magnussen et al 2007
<i>Employees are stoic and continue working despite beliefs that work causes and/ or exacerbates back pain</i>	Employees focused on their abilities over and above any disabilities and this belief was integral in maintaining a positive relationship with work	Flare ups were seen to limit the consistency of the worker's work performance		Participants demonstrated resilience and continued to work despite their pain. Participants often ignored their pain and continued working	Employees continued to work despite the pain	Workers with LBP emphasised the need for self-awareness of limitations to allow them to continue working safely		
<i>Self-management allows employees to work despite pain</i>	Participants were well informed about their rights related to work and the responsibilities of the employer.	Employees used annual leave v's sick leave to manage back pain Participants were concerned re use of medications to manage symptoms and maintain work capacity		Participants modified their work task depending on the severity of their symptoms. Flexibility surrounding work adaptation facilitated participation	Participants report rethinking their approach to the work task to reduce the work-related load on their back	Participants that had successfully returned to work recognised that they must play an active role in seeking strategies to address their low back pain to continue working rather than solely adopting a passive reliance on the employer for same.	Adjustment latitude is essential for continued participation at work. Employees perceived awkward ergonomic adjustments as superior to their own problem solving re self-management techniques	
<i>Colleagues- a help or a hindrance for workers with LBP?</i>		Informal work adjustments initiated by colleagues reduced the sense of emburdenment for the employee	Informal support gained from colleagues was seen as invaluable				A tendency to verbalise pain within teams made workers feel less discomfort when asking for help and co-workers seemed more inclined to offer help.	Collegial resentment limited the capacity to initiate work modifications for employees

<i>Concept</i>	Brooks et al 2013	Coole et al 2010 (a)	Coole et al 2010 (b)	Dean and Hudson 2011	De Souza and Frank 2011	Dionne et al 2013	Frederiksen et al 2015	Magnussen et al 2007
<i>Understanding amongst employers underscores the relations with and management of the worker with LBP</i>	<p>The perceived ability of participants to remain in work was influenced by their beliefs regarding the capacity for change of the work-based task and the flexibility exhibited amongst employers to initiate same.</p> <p>The employees' degree of confidence and insight into their LBP enabled or disabled conversations to negotiate the necessary changes to the work-based task.</p> <p>Personal relationships developed with line managers were seen as key in the facilitation of work task flexibility</p>	<p>Working in a small firm with a smaller number of colleagues made informal requests for modifications more difficult</p> <p>Back pain which occurred as a result of work-related injury generated increased support from employers as perceived by employees</p>	<p>Employees perceived that managers with experience of back pain were perceived to be more sympathetic.</p> <p>Employers were often perceived as being over cautious in support offered to employees.</p> <p>Employers encouraged employees to modify work tasks due to sense of responsibility and anxiety.</p>				<p>Workers complained that supervisors had little insight into their daily challenges. While supervisors were seen as responsive to suggestions of workplace improvement. Efforts were often only implemented depending on how cost beneficial they were.</p> <p>Lack of work flexibility, scope for work adaptations and poor managerial relationships reduced employee capacity to cope with back pain at work</p>	<p>High demand on employees by employers for productivity created excessive pressure on the employee</p>

<p><i>For the good of the worker or the workplace: Perceptions of occupational health and absence management policies and procedures</i></p>		<p>Employees worried about discipline measures being taken in light of sick leave if it were to be taken</p>	<p>Employees noted that the responsibility to contact occupational health rested on them (the employee)</p> <p>Employee's unsure re availability of occupational health services and felt that access to occupational health is at discretion of the employer.</p>	<p>Workers noted the difficulty often in attaining salary compensation money or cover for work related tasks.</p>		<p>Workers noted a hesitation to call in sick due to rigid and unforgiving absence management procedures</p> <p>Workers were less inclined to call in sick because the interviews were perceived as unpleasant interrogations and because they feared dismissal.</p>		
<p><i>Workers' dread of disclosure, discrimination and the doubt of others</i></p>		<p>Employees described caution re disclosure of back pain in the fear of being labelled a fraud or disabled. They feared being branded as an unreliable employee due to illness.</p>	<p>Employees noted the practice of the concealment of symptoms and often used annual leave rather than sick leave to manage their symptoms to avoid judgement.</p>			<p>A lack of verbalization of LBP was common between collegial teams. According to workers, this created an unfriendly environment and use of sarcasm that indirectly questioned the workers legitimacy and entitlement to take more breaks or to receive work modifications</p>		

<p><i>The emotional experience of the employee in pain (feeling worried, guilty and under scrutiny)</i></p>	<p>Workers with LBP described that they did not continue working for financial gain but out of need for self-identify. For many, work also served as a welcome distraction from the disability of LBP</p>		<p>If the worker was no longer able to complete the work task indefinitely, this increased the sense of burdenment and guilt felt by the worker</p>		<p>Participants acknowledged the risk of re-injury that was involved in continuing to engage in hard labour with LBP, but it was their love for this work that overruled any anxiety or hesitation and in turn facilitated continued participation</p>		<p>The unpredictable nature of back pain caused feelings of despair and anxiety amongst participants with fear of being unable to continue to self-manage their pain at work</p> <p>Back pain was highly influential on workers' feelings and/or behaviour. Disabling pain made the workers perceive themselves as physically weak and insufficient.</p>	
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Table 3b: Concept extraction continued

Concept	Ryan et al 2014	Shaw and Huang 2005	Slade et al 2009	Soeker et al 2008	Tveito et al 2010	Walker et al 2006	Young et al 2011
<i>Employees are stoic and continue working despite beliefs that work causes and/ or exacerbates back pain</i>	Employees described ignoring the perceived limits of their back pain to fulfil expected work demands.		Despite back pain being caused at work due to poor safety sanctions, employees felt at fault for their pain and assumed responsibility	Participants attributed their back pain to work related repetitive activity	Pain= drain. Working with pain impacted employee's participation in social activities. Employees acknowledged this, but continued working.		Remaining at work while in pain was preferable to employees as time off was not seen as helpful in managing symptoms.
<i>Self-management allows employees to work despite pain</i>		Employees described self-management strategies including self-monitoring of physical demands, working more slowly and the use of assistive devices to facilitate continued participation at work.	Attaining insight and understanding into the aggravators and easers of LBP allowed workers to modify the work task as they were best able		Workers reorganised their morning rituals to alleviate morning stiffness at work. Another strategy was stretching and exercising during the working day Participants noted mental segmenting and rearranging work tasks to leave harder tasks towards end of the day as being helpful		Workers with LBP described both physical (lifting lighter loads) and psychosocial (stress reduction) adjustments that enabled them to continue working
<i>Colleagues- a help or a hindrance for workers with LBP?</i>	Employees questioned the genuine nature of colleagues offers of support at work Employees described poor understanding amongst colleagues re back pain and this led to feelings of judgement Due to the invisibility of back pain, employees were often expected to complete		Employees reported negative feelings as a result of judgement from colleagues	Positive co-worker relationships increased employee's capacity to cope with LBP at work Gaining seniority in the workplace facilitated a sense of respect and support amongst colleagues	Participants noted that have having an informal support group of workers with LBP helped in coping at work Participants noted that communication was essential in order to gain support from co-workers		

	work tasks beyond their physical capacity due to pressure from colleagues						
<i>Understanding amongst employers underscores the relations with and management of the worker with LBP</i>	Employees felt that employers often have difficulty balancing being supportive to legitimate employees v's managing those taking advantage of the system	The relationship and interactions the employee had with the line manager influenced the degree of ease in which modifications were implemented.		Employees noted there was a need for managers to increase knowledge on LBP to adequately manage employees. When an observed understanding was absent this created a tension between worker and employer. Employers were perceived as unsympathetic and were perceived to question the validity of employee LBP	Employees reported that they often engaged in keeping up appearances to meet employer expectations	Lighter duties being made available to the employee were seen as key to maintaining a productive presence at work	
<i>For the good of the worker or the workplace: Perceptions of occupational health and absence management policies and procedures</i>			Poor workplace policies and sanctioned practices had led to over straining during daily work tasks with little effort made to adapt same from higher authorities in the work environment				Employers perceived that work-based policies were of employer benefit and of limited benefit to the employee
<i>Workers' dread of disclosure, discrimination and the doubt of others</i>	Invisibility of LBP lends to lack of believability amongst colleagues about employees' pain	Participants were concerned that other workers perceived them as lazy 'slackers' if they requested lighter duties or help with work tasks	Due to the invisibility of the disability often associated with LBP, workers felt doubted due to lack of proven pathology on imaging to validate their pain	Doubt from co-workers re genuinity of LBP condition acted as a barrier to gaining satisfaction from work	Workers who had not disclosed the problem to their employees felt the company would be unwilling to accommodate their needs and some worried that their employment would be terminated if they disclosed the pain problem	Employees noted the practice of concealment of symptoms/ their diagnosis of back pain to remain in employment or to gain employment initially as an act of desperation.	Feelings of stigmatisation were common amongst employees. This stigma created increased anxiety for workers with LBP

<p><i>The emotional experience of the employee in pain (feeling worried, guilty and under scrutiny)</i></p>	<p>Participants described a denial of symptoms so as to continue working</p>			<p>Fear for continued capacity to work into the future</p>	<p>Some participants worried that their reputation as an otherwise positive and good-humoured worker could be damaged during pain flare-ups.</p>	<p>While working with LBP, workers noted the unrelenting fear of future re-injury which made have knock on effects on other life domains</p>	<p>Anxiety exacerbated by the unpredictability of the nature of LBP</p>
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2.5 Discussion

2.5.1 Main Findings

This article systematically reviews and synthesises qualitative studies of the employment based experiences of workers with LBP. It reveals that employees with LBP describe themselves as stoic in continuing to work despite LBP and engaging in supportive or self-concealed methods of self-management to maintain work performance. These findings resonate well with other qualitative studies of the employment experiences of others with health conditions such as multiple sclerosis, arthritis and cancer where the role of self-management strategies in work participation have been well documented (Franche et al 2005; Johnson et al, 2005; Toye et al, 2016).

In contrast, unlike research on the employment experiences of those with other chronic illnesses, the reasons that employees with LBP continue working and beliefs about the role of work in recovery from LBP have not been clearly elicited from the synthesised studies. Ostlund et al (2002) described that those with musculoskeletal pain derive meaning and identity from work in four distinct ways. Whilst some workers describe a need and love for work, other workers are categorised by continuing to work to satisfy the needs of others around them, whilst being uncertain of their own work capacity, to avoid others from having to pick up their slack. Within the included studies, only one study (Brooks et al; 2013) identifies the work setting as a distraction from pain. Across the included studies there was little discussion of any positive benefits from work, financial imperatives to work or the reasons why people with LBP continued to work despite pain. In contrast, studies conducted among people with chronic diseases have consistently found that ‘work’ forms a central basis for self-identity and self-esteem whilst forming and maintaining social relationships and represents an individual’s abilities and health (Banning et al, 2011; Toye et al, 2016). The physical and mental health benefits of good quality employment have previously been established (Saunders and Nedalec, 2014). In addition, in a survey conducted of people with chronic diseases (Vooijs et al, 2018), the main reasons for valuing work were that it facilitated financial independence and provided a social contact that enabled a

contribution to society. This type of exploration and acknowledgement of the potential losses associated with not working, or motivating factors for work were not addressed in the included studies. The lack of attention to reasons for working or perceived benefits of employment may reflect the research aim and focus of the included studies. It must also be considered that for some, work was considered to be a cause of their LBP and this may influence beliefs about the benefits of work or the role of work in recovery.

Evidence supports interventions that foster self-management in the workplace, that are inclusive of all stakeholders (Johnson et al, 2004; Banning et al, 2011; Toye et al, 2016) and the provision of temporary modifications at work within a reasonable timeframe to maintain people with MSD's in employment (Shaw et al, 2009; Van Oostrom et al, 2009). In this instance it is important to note the difference between interventions that support self-management and self-management strategies initiated by the worker. The findings revealed in this synthesis are broadly in line with evidence based interventions to prevent work disability, however in most cases it was self-initiated strategies by the worker that were emphasised and interventions by occupational health were often seen as lacking or disregarded by employees. Of note, the self-management strategies described by participants (pacing, self-monitoring of physical demands, stretches, task modification, and the use of equipment) could mostly be considered as reflective of a view that LBP is a biomechanical problem. Unsupportive or adversarial relationships with colleagues, employers and occupational health were identified as unhelpful in maintaining work performance however were not implicated as causative of LBP. Despite the strong evidence base to the contrary (Kerr et al, 2001; Hartvigsen et al, 2004) psychosocial factors such as stress, job satisfaction, contract renewal pressures, wage insecurity or shift working schedules were not identified in the synthesis as causative of LBP or influential in the work-related experiences of people with LBP. This lack of identification amongst participants may reflect a reduced insight into the contributory nature of such factors due to the enduring and persistent bio-medically driven societal beliefs surrounding LBP (Singh et al, 2018).

A core finding of this synthesis is the emotional experience of the worker with LBP in response to the challenges encountered when interacting with employers and colleagues in the workplace. Discrimination in the workplace against people with disabilities is common (Okechukwu et al, 2014) and has been found to be contributory in inducing a negative cycle of stress and potentially further ill health (Colella et al, 2005; Okechukwu et al 2014). Throughout the included studies there was a strong finding that participants crave legitimacy; they report negative experiences when they perceive the reality of their LBP is being doubted by colleagues and employers. This sentiment is echoed within the synthesis conducted by Toye et al (2016) in which workers often engaged in concealment so as to protect their perceived work ethic, to avoid being labelled as a ‘dosser’ and to protect their self-esteem. These findings and those discussed above emphasise the existent societal viewpoint on LBP, which is largely that of a biomedical one. With same, factors such as anxiety, stress or sleep deprivation that often occur hand in hand with pain are disregarded and physical functioning and capacity for a task become the sole public determinant for proof of disability, further exacerbating these underlying psychosocial variables.

Throughout the included studies, workers described varied experiences of employer and colleague support and the findings emphasise the highly influential role of employer and colleagues on the work experiences of people with LBP. Where employers or colleagues lacked knowledge of LBP, doubted the person with LBP, or were considered unsupportive it had a detrimental effect on the experience of people with LBP. These findings resonate well with those described by workers with cancer (Clarke et al 2010; Banning et al, 2011) in which the employer role was seen as fundamental in continuing to work successfully despite injury and in which an employer lack of understanding is emphasised as the main barrier to maintaining pre-injury work capacity.

Further, workers in this synthesis described occupational health services as unhelpful, unsupportive, and favouring the employer over the employee and consequently limited their engagement with same services. The concept of ‘iatrogenesis’ used mostly in medical contexts describes the process in

which treatment itself induces adverse conditions for those it intended to assist. Eakin (2005) noted that this concept of iatrogenesis too can be translated to encompass adverse effects of system-level interventions and institutional management arrangements. Within the occupational health field, Lippell (1999), identified the anti-therapeutic effects of compensation systems and related managerial policies and practices which can be injurious to health and to the employer- employee relationship and serve to escalate the practice of non-disclosure due to fear of discrimination and dismissal. This presence of institutional mistrust has been clearly established in return to work research (Eakin, 2005) but too was identified amongst employed workers in this synthesis and added to the reported emburdenment of the employed and injured worker.

2.5.2 Implications for practice

The lived experience of the employee with LBP is contextualised as a challenging, emotional experience. This adds to the impetus to develop and deliver interventions that adopt a biopsychosocial approach over and above solely focusing on physical components of the work task and to consider the work role holistically (Froud et al, 2014).

The clinical practice of rehabilitation professionals may be overly focused on symptoms related to LBP and the physical demands of work tasks rather than the emotional well-being and coping skills of the employee with LBP (Wynne-Jones et al, 2014; Cancelliere et al, 2016). Resilience and self-efficacy remain key in the promotion of self-management and it remains unclear as to whether rehabilitation professionals are confident in the teaching and facilitation of same (Synnott et al, 2015). In addition, current practice amongst rehabilitation professionals may not focus sufficiently on negotiations with the employer and/or occupational health. Previous research has noted that health care professionals lack skills or lack clarity in their potential role in facilitating work participation (Hutting et al, 2017). This finding is mirrored in previous research (Shaw and Huang 2006) in which healthcare professionals are encouraged to explore the meaning of work with employees as

establishing same is seen to reinstate a motivation to remain or return to employment. Professionals should focus their interventions on meaningful aspects of work and aid their employees with pain in identifying same as a motivator (Shaw et al, 2009).

The findings of this synthesis underscore the importance of intervening with people with musculoskeletal disorders whilst they are still in work but facing challenges to prevent absenteeism and work disability. It is important to note that timely intervention may not always mean immediate negotiations with or between employers and/or occupational health authorities. Both employers and health care practitioners should consider intervening in a manner that considers broader issues such as psychosocial factors related to work, previously discussed and occupational health service provision.

2.5.3 Strengths / limitations

This is the first study to review and synthesise the findings of studies of employees' employment based experiences with LBP. Synthesising studies across work sites and socioeconomic groupings has enabled a broader understanding of work experiences for employees with LBP. Of particular note, the authors acknowledge that by specifically looking at those who continue to work with LBP that a bias towards those with the lowest disability or greatest coping and self-efficacy must be considered, which may in turn affect the generalisability of results towards all people with LBP.

One of the included studies specifically describes the employment based experiences of self-employed farm based workers in a rural setting (Dean et al 2011). This study did not contribute to concepts about relationships with work colleagues, employers and occupational health as it was not relevant in this setting. Whilst in most cases, the included studies were not all contributory to all seven final concepts, it is recognised that the study by Dean et al (2011) was most limited in relevant and translatable data.

Systematic and robust methods were employed to identify, appraise and synthesise the findings. The use of meta-ethnography is an interpretive process which may elicit different findings amongst other author groups. However the identified findings reflect the work experiences reported among

employees' with musculoskeletal pain (Toye et al., 2016) Translating evidence on employment across international contexts can be difficult due to policy and legislative differences such as differences in workers compensation systems and sick leave entitlements. However the development of a line of argument in this synthesis illustrates that across fifteen studies in varying countries, common experiences were reported by workers with LBP. The influence of culture on employees experiences was not explicitly elicited from this study, despite growing awareness of the influence of culture on LBP (McCauley et al, 1993). It is important to note that there was a lack of geographical spread in the included studies and all included studies were conducted in the Global North. The English language restrictions imposed by the authors during the study identification process further narrowed the search and may have limited the range of possible types of employment based experiences that could be reported on.

2.5.4 Research implications

Most employment based research has been conducted in the last ten years, thereby emphasising the growing need for continued research. The central role of colleagues and employers for successful work participation in light of pain is noted. Thus future research should explore the perspectives of these key players in the employment experiences of people with LBP. Future research should also examine the effectiveness of interventions amongst employers and colleagues to facilitate improved implementation of self-management strategies within the workplace. This in turn may contribute to shifting the societal viewpoint on pain which feeds into the vicious cycle of discrimination currently experienced by employees with LBP in work.

To date, work participation amongst workers that are self-employed remains understudied. It is acknowledged that the supports available to the self-employed may differ significantly; warranting further exploration of the experiences of those injured and whom remain working in this context.

2.6 Conclusion

Our findings highlight that individuals with LBP largely feel unsupported at work and engage in strategies to remain working without actively seeking support from those around them due to a perceived sense of judgement. Employer and collegial relationships and their respective understanding of LBP, were emphasised as influencing the experiences of people with LBP at work. When lacking, participants detailed the challenges and sense of emburdenment they induced.

Thus said, the practice both of rehabilitation professionals and employers may be overly focused on symptoms related to LBP and the work task rather than the emotional well-being and coping skills of the employee with LBP. It remains unclear as to whether rehabilitation professionals or employers are confident in the facilitation of same.

Chapter 3: Work Participation of People With Musculoskeletal Disorders in Ireland: A Qualitative Multi-Stakeholder Analysis

3.1 Abstract

Introduction:

Musculoskeletal disorders (MSD's) are a leading cause of work disability. Good work offers many potential benefits to employees with MSDs. Understanding the perspectives of all the players involved in helping people with MSD's to stay at, return to and remain in work will advance understanding of work related interventions and services. Given the varying health and social insurance systems across international contexts there is a need to develop contextually specific knowledge. This study aims to examine the experiences of people with musculoskeletal disorders (MSDs), employers, health professionals and other key stakeholders involved in the return to work process to explore their experiences of work participation in light of pain.

Methods:

Twenty-three in-depth qualitative interviews were completed with people with MSD's, health professionals, and employers to explore their perspectives the retention of, and return to, work in light of pain. Data were analysed using thematic analysis.

Results:

Across all stakeholder groups biological factors were most implicated as the reason for work absences and the resolution of symptoms was identified as the single greatest enabler of return to work. Although pockets of good practice were identified, in the main, health professionals and employers describe uncertainty about their role and responsibilities and describe a narrow scope of practice.

Patients report a mostly adversarial experience of vocational supports (e.g. Occupational Health services). Overall, four themes were identified: 1) Efforts to balance pain and work participation; 2) Employers and HCP's are willing but not fully ready to support the work participation of people with MSD's; 3) Perceived dominance of a biological basis for pain, and 4) The Ominous nature of occupational health.

Conclusion:

Vocational rehabilitation stakeholders in Ireland do not report awareness of the complex interplay of biological, psychological and social factors influencing work participation for people with MSD's. Vocational supports and services are hampered by role uncertainty and consequentially adversarial experiences for service users.

Key words/ MeSH headings:

Musculoskeletal System

Rehabilitation, Vocational

Qualitative Research

Employment

3.2 Introduction

It is well documented that an individual's ability to work is of vital importance to both their own personal health but also to the health of the wider economy (Wanberg, 2012). In Ireland, MSDs are the number one cause of work absence, accounting for 50%, with a direct cost to the economy estimated to be of €750m per annum (Bevan, 2009).

Psychosocial variables are central to understanding the relationship between impairment, pain and function in people with MSDs (De Croon et al, 2004). In her review of the health of Britain's working age population, Dame Black noted that worklessness has consequences for individuals, their families and society as a whole (Black, 2008). Whilst there is no single agreed definition of "worklessness", Dame Black noted that people are described as "workless" if they are involuntarily excluded from the labour market and in receipt of certain benefits" (Black, 2008). Work is generally good for both physical and mental health and well-being (Waddell & Burton, 2006) and the deleterious effects of unemployment have been well documented (Wanberg, 2012). Qualitative research has highlighted the losses experienced by people with MSD's from work disability including consequences on social interaction, social status, identity and lost opportunities for personal development (MacNeela et al, 2015; Lempp et al, 2006). To date, unilateral, fiscally driven interventions have been the main strategy employed to encourage a return to work for disabled workers. However, a recent study by Barr et al, (2015) highlighted clearly the problems with social policies; interventions and capacity assessments which try to force people back to work and off benefits.

A systematic overview of qualitative studies that explored the experiences of patients with arthritis who remained employed or returned to work showed physical factors alone did not account for the experiences of people with MSDs at work (Hoving et al, 2013). The work environment, job satisfaction and relationship with colleagues and/ or employers were all identified as playing a key

role. This underlies the thought process in which work disability among people with MSDs is acknowledged as being complex and not explained by physical factors alone (Hoving et al, 2013).

Vocational rehabilitation is defined as whatever helps someone with a health problem to stay at, return to and remain in work (Waddell et al., 2008, pg. 5). However, identifying and implementing effective vocational rehabilitation services to address the work related consequences of MSD's remains elusive (Waddell et al, 2008, pg.11). The range of stakeholders in this area is wide reaching and variable depending on context and can include; the individual, health professionals (general practitioners, occupational health physicians, occupational therapists, physiotherapists) employers, and occupational health services. Further complicating the translation of research evidence to practice are the varying health and social insurance systems across international contexts.

There is widespread consensus that effective vocational rehabilitation requires both healthcare that is focused on work and accommodating workplaces with proactive approaches to sickness (Waddell, et al, 2008), with communication and coordination between the individual, the workplace and healthcare (Waddell, Burton & Kendall, 2008). Reflective of this, international research policy related to work, advocates for a collaborative multi-stakeholder approach to maintaining employees with MSDs in work and facilitating a successful return to work for those out of work (Bevan et al, 2009). However, research has revealed that many of the stakeholders that should be involved in this return to work process, including employers and health care practitioners, often lack confidence in their role in same, with stakeholders acknowledging they do not have the training, time, supports or resources to initiate such a process (Shaw et al. 2009; Synnott et al. 2015). Previous interviews with employer stakeholders revealed complex emotional and practical issues facing employers when supporting an employee to return to work after a stroke. This study also highlighted the frequent lack of knowledge and experience employers had in supporting employees with a disability (Coole et al., 2013).

The individual, employer and health professional may have differing, sometimes competing, goals and motivations (Young et al., 2005), thus as suggested by Young et al (2005), clearly articulating and operationalizing stakeholders' perspectives may allow researchers to advance the understanding of return to work interventions and outcomes. Consequently it is warranted that the perceptions of stakeholders involved in the return to work and the retention of work process are explored to establish the experiences of those working, employing and supporting workers in the Irish context. This may guide a safe and satisfactory retention of, or return to work for those involved.

In light of same, the objective of this qualitative interview study is to examine the experiences of people with MSD's, employers, health professionals and other key stakeholders involved in the work process and to explore their experiences of work participation in light of pain.

3.3 Method

3.3.1 Study Design:

The study was grounded with an interpretative paradigm, recognising that multiple interpretations of any event or experience were possible. Interpretive description is a non-categorical methodological approach that was developed purposely to provide healthcare practitioners with a conducive framework to allow unanticipated categories of meaning to emerge (Hunt, 2009). An interpretive descriptive design was deemed compatible with the objectives of the study as the theoretical standpoint of this design centres on the ability of interpretive description to provide generalisable insights into the practices of health care practitioners and the other relevant stakeholders within their daily clinical or work based practice (Hunt, 2009)

The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Appendix 6) guided the reporting of this study (Tong et al, 2007). The interview guide was developed based on

the research questions and varied depending on the participant group. Key areas addressed in all interviews were the participant's experience of sick leave due to a musculoskeletal disorder, what factors the participant considered important in facilitating a person with a MSD to continue working, participants knowledge of legislation, social protection benefits and support for vocational rehabilitation of people with MSD's. To ensure that the questions had valid and meaningful theoretical scaffolding, the questioning route for each of the stakeholder groups was generated based on a literature review of articles in the area (Hunt, 2009). The route was then defined by discussion with the steering committee for this project, and is included in the appendices (Appendix 1A). The steering committee for this project consisted of the following members: Dr.Norelee Kennedy (Head of Dept, Clinical therapies- specialist interest in arthritis); Dr.Kieran O'Sullivan (Senior lecturer- special interest in LBP); Dr. Joe Devlin (Consultant Rheumatologist, ULHG); John Church (representative from Arthritis Ireland); Leonard O'Sullivan (Lecturer, Product and Design); Eimear Lyons (Occupational Therapist- special interest vocational rehabilitation) and Dr. John Garvey (Senior Lecturer, Kemmy Business School).

3.3.2 Data collection:

All interviews were conducted by AS, a female physiotherapist employed as a research assistant with previous experience of collecting and analysing qualitative data. The interviewer had no prior established relationship with the majority of participants however she had previously met two of the health care participants in a professional context. Recruitment materials informed participants that the study was exploring the perspectives of all the players involved in the work experiences of people with MSD's. The interviewer (AS) and supervisor (KR) discussed the potential biases they brought as HCPs to the data collections and analysis process and used peer discussion to mitigate these biases.

Abrams, (2010) noted that whilst all research is essentially coloured by the researchers' personal circumstance, beliefs and experiences, continued reflexivity and reflection on these perceptions may

help to negate any biases on the intended research (Finlay, 2002). Through the data collection process I tried to be consciously aware that I was a physiotherapist practising clinically with experience of treating clients with MSD's. Recording reflections is seen as an important component in upholding the quality of qualitative research (Alvesson and Skoldberg, 2009) and it was through the recording of reflections in a reflexive journal that I became aware of how my positioning as a practising clinician may have imposed a bias on the content collected in the interviews. I as a clinician, may have been defensive toward the role of the HCP when people with MSD's discussed their interactions with HCP's in a negative light. In addition, there may have been more verbal prompting with HCP's when interviewed so that their interactions they described with patients were seen as evidence based and favourable. In recording reflective accounts in my journal throughout the early interviews, this was identified as a potential bias early in the data collection stages and was highlighted so as the depth of content explored relative to the topic of HCP' was not affected in remaining interviews. In highlighting this through discussion with my supervisor, it helped to create insight and awareness of same bias at analysis stage and encouraged open interpretation throughout the analysis process in its entirety. This openness is essential to producing credible and related research (Shenton, 2004).

Interviews ranged in length from forty-five minutes to one hour, with an average length of fifty minutes. Some interviews were conducted in person and some over the phone. Data was collected in a variety of locations and no non-participants were present during data collection. Written consent was obtained in advance of the interview by posting the information sheet and consent form with a stamped addressed envelope. For those participants that wished to complete the interview via telephone, verbal consent was requested from the participant during the interview. Interviews were recorded for transcribing purposes using the recording software Audacity and a dictaphone.

All interviews were recorded, transcribed in full and member checked by participants for accuracy (no corrections). Reflective notes were recorded by the interviewer post interview and discussed with the

supervisor. Recruitment for all groups and all interviews were conducted simultaneously and in the final five interviews the interviewer noted repetition of most key ideas from earlier interviews.

3.3.3 Participants:

Theoretical sampling techniques guided the recruitment of participants from three stakeholder groups. The inclusion of these stakeholder groups was guided by previous related research that denoted these as key demographic participants for work-related research (Baril et al. 2003; Barnes and Holmes, 2007) and included:

- 1) Employed adults with MSDs or those currently out of employment (n=12)
- 2) Employers with experience of managing and retaining adults with MSDs at work (n=6)
- 3) Health professionals with experience of treating patients with MSDs (n=5)

Ethical approval for the study was sought from the Education and Health Sciences Research Ethics Committee and approved (application ref **2015_10_14_EHS**). The recruitment strategy was broad and included open advertisement in a number of locations. Adults with an identified MSD were recruited through open advertisement in organisations of relevance (Arthritis Ireland, Chronic Pain Ireland, FibroIreland) and on social media groups of relevance. A recruitment email was also circulated via the UL internal email to staff (Round 1 recruitment). As an adequate number of participants were not achieved from round 1 recruitment, the round 2 recruitment process was initiated and involved circulating a recruitment poster (See Appendix 2) via email to large employers (50+ employees) and service providers to employed adults (e.g. Med mark, Occupational Health advisors, SOLAS, Higher Education Authority) whose contact details were freely available online for display/circulation in the workplace.

Health Care Practitioners were recruited via open advertisement in the professional organisations of relevance (Irish Society of Chartered Physiotherapists, The Association of Occupational Therapists Ireland, and Irish College of General Practitioners) and through personal contacts of study

investigators. A recruitment email was also sent to relevant members of the Fit For Work Coalition working group.

Employers were recruited via direct email sent to personnel in managerial positions within companies whose contact details were freely available online, through personal contacts of study investigators and through open advertisement in organisations of relevance (The Irish Business and Employment Confederation (IBEC), Social Entrepreneurs Ireland, Irish Small and Medium Enterprises (ISME) Association, Small Firms association (SFA)). Table 4 details the demographics related to each of the participants recruited.

The recruitment of each of the participant demographics was performed simultaneously. Throughout this process, recruiting employers and HCP's proved difficult and thus there remained an imbalance between patients recruited and other key stakeholders. Despite this, saturation was attained within the final interviews conducted with both the employer and HCP demographics recruited. During the interviews the researcher took notes as needed and statements of relevance and contextual field notes were written verbatim. This aided in the identification of the point of data saturation as it was evident when no new material or concepts arose (DiCicco-Bloom and Crabtree 2006). The initial interviews conducted with each of the four demographics helped to inform the questioning route of future interviews as the recruitment continued. Each participant was provided with an information sheet detailing the objectives of the study (Appendix 3) and a consent form (Appendix 4).

3.3.4 Analysis:

Based on the research aim thematic analysis situated within a realist epistemology was used for data analysis. Thematic analysis is a theoretically flexible approach which can potentially provide a rich and detailed, yet complex, account of the data. An inductive approach to analysis was undertaken using the six stage guide to thematic analysis described by Braun and Clarke (Braun and Clarke 2006; Braun et al, 2014; Clarke and Braun, 2014). The first phase involved a process of familiarisation with

the data through repeated reading. Phase two involved the identification of initial codes (example Appendix 5). The third phase re-focused the analysis at the broader level of themes by sorting the different codes into potential themes. In the fourth stage all themes were reviewed to ensure all themes have internal homogeneity and external heterogeneity. In the fifth phase themes will be named and defined.

Interviews were transcribed verbatim. Specialist qualitative research software was used to aid in sorting the data (Walsh, 2003). Three transcripts were randomly selected and initial inductive codes were formed individually by two authors (AS and KR). These two initial code lists were then amalgamated and a comprehensive code list was finalised, in view of the codes most representative of the dataset informed by background reading related to the research question. The finalised code list was then applied to all transcripts by AS.

Coded data were categorised using the qualitative research software and through a process of repetitive interpretation, synthesising and theorising – themes were identified (Thorne et al, 1997). Transcripts were then re-read several times and the selected themes were finalised based on consensus discussion between AS and KR. The software aided in determining the intensity and coverage of codes that contributed to the formation of these themes (Walsh, 2003). Four categories were identified to account for all identified themes.

Throughout data collection and analysis, widely accepted strategies for ensuring quality in qualitative analysis were maintained, including credibility, confirmability and transferability (Lincoln and Guba, 1985). **Credibility** is defined as “*the confidence that can be placed in the truth of the research findings. Credibility establishes whether the research findings represent plausible information drawn from the participants’ original data and is a correct interpretation of the participants’ original views*” (Lincoln and Guba, 1985). Throughout this research, efforts for credibility were actioned through the reflexivity

adopted by the primary researcher in the data analysis process to ensure the analysis was unbiased and not rooted in her own individual experience. This was further supported by member checking completed by the research team with study participants. Finalised transcripts with a summary of selected themes were then emailed to participants for validation with no amendments received from participants. **Confirmability** is described as “*the degree to which the findings of the research study could be confirmed by other researchers. Confirmability is concerned with establishing that data and interpretations of the findings are not figments of the inquirer’s imagination, but clearly derived from the data*” (Lincoln and Guba, 1985). In theme development, both the researcher and supervisors met to ensure that the theme collectively was grounded within the original research and codes. **Transferability** is described as “*the degree to which the results of qualitative research can be transferred to other contexts or settings with other respondents*” (Lincoln and Guba, 1985). For the most part, through the data collection and analysis process, efforts were made to underline the context in which both were performed so that the experiences and behaviours described would become meaningful to an outsider. Comprehensively describing the participants as performed in Table 4 also supports the transferability of the findings.

Table 4: Participant demographics

Participant identifier	Gender	Background	Nature of employment	Work absence/ current work status
Pp001	Female	Born with hip problem 9 surgeries	Some part time work in a community garden	<ul style="list-style-type: none"> On long term absence form work
Pp002	Male	x 20 years history of back pain Cattle farms in own time	Guard (Public sector)	<ul style="list-style-type: none"> Minimal sick leave a week or two
PP003	Female	x 20 years history of back pain	Office based secretarial work	<ul style="list-style-type: none"> 3 weeks in one year period
Pp004	Male	Employee with rheumatoid arthritis	Planning manager in a devices company	<ul style="list-style-type: none"> Minimal. Two weeks recently due to hospital admission related to rheumatoid arthritis
Pp0005	Female	Workplace sustained MSK injuries	Intellectual disability nurse	<ul style="list-style-type: none"> Minimal sick leave a week or two
Pp006	Male	Client with MSD	Self-employed haulage	<ul style="list-style-type: none"> Some historic work absences
Pp007	Female	Client with LBP (described as discogenic in nature)	Early childhood care	<ul style="list-style-type: none"> On long term absence from work
Pp0008	Female	Client with LBP	Senior administrator in a health service	<ul style="list-style-type: none"> Sick leave for past 9 years
Pp009	Female	Osteoarthritis Fibromyalgia	University Lecturer	<ul style="list-style-type: none"> 6 weeks at time of initial diagnosis 5-6 days per semester
Pp010	Female	Client with rheumatoid arthritis	Physiotherapist	<ul style="list-style-type: none"> V minimal singe days / one week historic work absences

Pp011	Male	Client with LBP	Tradesman	<ul style="list-style-type: none"> • Long term absence from work
PP012	Female	Back pain x 10 years and vertigo	Administrator university	<ul style="list-style-type: none"> • 7 days sick leave in 10 years
				Years in current position
HCP-001	Female	Work related injury Legal cases and reports Occupational health services	Physio Private practice	<ul style="list-style-type: none"> • 5 years
HCP-002	Male	Clients referred from GP or other allied health professionals	Physiotherapist primary care	<ul style="list-style-type: none"> • 6 years
HCP-003	Female	Clients with inflammatory arthritis and osteoarthritis	Senior Occupational Therapist in rheumatology	<ul style="list-style-type: none"> • 9 years
HCP-004	Female	Clients with MSD's	Occupational therapist in rheumatology	<ul style="list-style-type: none"> • 7 years
HCP-005	Male	30% of caseload presenting with MSD's	General Practitioner	<ul style="list-style-type: none"> • 2 years
Emp001	Female	Staff working within registered charity	HR Manager	<ul style="list-style-type: none"> • 5 years
Emp002	Male	Factory workers	Health and Safety Manager	<ul style="list-style-type: none"> • 8 years
Emp003	Male	Employed prison officers	Prison Governor, Employer, HR	<ul style="list-style-type: none"> • 22 years- now retired

Emp004	Female	Employed staff local to school and with the Department of Education	Primary School Principle	<ul style="list-style-type: none"> • 3 years
H C P Emp A	Male	Clients working in manufacturing industry	Occupational physician	<ul style="list-style-type: none"> • 6 years
HCP Emp B	Female	Clients working in manufacturing industry	Occupational health nurse	<ul style="list-style-type: none"> • 2 years

3.4 Results:

Through analysis, four main themes were identified: 1) Efforts to balance pain and work participation; 2) Employers and HCP's are willing but not fully ready to support the work participation of people with MSD's; 3) Perceived dominance of a biological basis for pain and 4) The Ominous nature of occupational health.

Theme 1: Efforts to balance pain and work participation

This theme relates to employees experiences of working with pain and provides insights into employer perspectives of some of the strategies used by workers to stay working despite pain which in avertedly influence the workers experience. Employees experience pain as directly affecting their work ability and work performance and yet they work hard to manage their pain in order to continue to work. An absence of support or information for employees with MSD's was identified. Employees who continue to work with pain report emotional and social consequences from being judged by colleagues. Similarly, employees who cease working due to pain also report emotional consequences and losses. Employees describe the pain intensity they experience and its consequent effect on energy levels and functioning that impedes their physical capacity to work.

“Pain just brings exhaustion by itself. And it's basically not capable. It's torturous. You're not capable of functioning...” (Pp009)

Many participants described how the pain they experience means a desk oriented job is not feasible due to the associated long periods spent sitting and restricted opportunity to mobilise.

“It's mainly the sitting down...that wouldn't suit me because I can't sit down for very long. I would be hampered by the fact that I couldn't get up and walk around” (Pp001)

Not only was pain described as having a direct impact on work performance but frequently work tasks were implicated in the initial development of pain or musculoskeletal condition.

“I came and worked and went home. At about quarter to five that evening, I just completely seized up. I’ve been in pain ever since. Since May 2008. The day I stopped working. That’s the day I started on morphine” (Pp008)

Employees describe modifying and planning their working day to manage their symptoms and therefore maximise their participation at work.

“I’m very aware that by about half three in the afternoon I’m gonzoed, I’m really gonzoed so I would plan my day so I’d perhaps teach in the morning and maybe do more practical work in the afternoon” (Pp009)

Many employees described employing strategies to protect their backs to enable continued work participation.

“Back pain doesn’t go that quick. You have to be more cautious than normal about your movements. While you have to kind of plough on there’s a degree of minding me in it too” (Pp003)

Employees identified a need for greater support for employees with MSD’s however, they reported very limited awareness of services or organisations to support work participation

“ You know for teachers when they’re finishing up work, they’re sent on courses. They have days together where they support each other. Nothing like that for tradesmen” (Pp007)

Employees differed in their experiences of sick leave. Feelings of guilt were commonly reported by employees who took sick leave from work.

“I have flare ups and I do miss time from work. In other words if I’m up all night in pain I stay in bed the next day...There was a time when I was younger I would go to work...but not anymore and I’m hard on myself because of that” (Pp009)

In contrast, other employees reported avoiding sick leave by using holiday or annual leave to avoid consequences in the workplace from taking sick leave such as the involvement of Human Resource personnel.

“I took a day’s leave on Tuesday because I was concerned about the pain. Leave goes back a full year and how many times you’re out. I just couldn’t be arsed with...as I say drawing anyone on me or HR on me” (Pp004)

It was acknowledged both by employees and employers that sick leave may be abused by some employees. Employees acknowledged this and distanced their own experience from this type of abuse.

“You see people who go sick and take it as a form of leave. And I don’t want to be put into that category” (Pp003)

“There is abuse absolutely. I mean there are certain individuals who will always try and misuse things a little bit if they can get away with it. Some people you know miss every Monday or every Friday of the long weekend” (Emp001)

Employers reported surveillance and monitoring of absenteeism trends.

“Yeah I have to be honest with you and say that the graph around attention and focus on sick leave would go up and down depending on who and time to time” (Emp002)

In most instances, employers described that sick leave entitlements were threatened in light of rising absenteeism, over and above considering systemic causes for same.

“But at one stage our absenteeism was rising a little bit and we were becoming concerned. We met with staff and team and delivered a presentation and went through concerns and how difficult it was for us to manage the department if the absence continued. So at that point we actually had to threatened removing sick pay scheme. And we actually in the end, we did enforce it for a number of individual who didn’t improve” (Emp001)

Many employees described feeling pressure to continue working despite pain for financial reasons.

“My youngest is in college and I’m a single parent. I have to get him through” (Pp004)

For many of the employees with pain, despite continuing to work, they perceived that colleagues and managers / employers were judging them and questioning the validity of their pain.

“It’s what draws attention to you. People watch you then. You’re being watched from all angles. So many managers, inspector’s and you’ve all those people and they’re just watching” (Pp003)

Employees that ceased working because of their pain described significant losses both financial and emotional.

“And it’s then that you kind of think, oh my god whatever would I give to be going to work, if only four or five hours, couple of days a week. It’s only then you realise there’s a lot of positives to working that we don’t realise when we’re there giving out about it” (Pp008)

Theme 2: Employers and HCP’s are willing but not fully ready to support the work participation of people with MSD’s

This theme relates to the experiences of employers and HCP’s who report difficult and challenging experiences of working with employees with MSD’s. Employers want to facilitate the work participation of an employee in pain but report much uncertainty about how to do this in practice. Despite these challenges, some pockets of good practice in services for employees with pain are described and employers and HCP’s identify many opportunities to offer better services to employees in pain.

Employers described implementing work accommodations or adaptations as challenging.

“Some of our offices I do think we’re restricted. Our offices are small...small toilets and very few of the offices are accessible to someone who may be in a wheelchair” (Emp001)

Uncertainty and lack of guidance around accommodations and adaptations was commonly reported by employers.

“For one worker who hurt her back there are instances where she’d have to go to the bottom of the cabinet and I’d be like “will I get that for you? No, no I can do this”. So you are wondering how much of this do I allow and facilitate or am I putting her at risk?” (Emp003)

Employers commonly reported a desire to support employees adequately and meet legal requirements but uncertainty and anxiety about how to achieve this in practice.

“I’m nervous about employing a second secretary as like a shadow and then when one person is out it’s not such a traumatic experience for the rest of us and that some of the work might still go on. But I’d be worried about the worker who is out. Would it be seen as unjust if I was to give somebody else hours and my rationale would be well I need somebody here when you’re not. But how can that be done politically correct?” (Emp004)

Employers described challenges in managing the responses of uninjured colleagues to the implementation of accommodations for an injured colleague. Non-injured workers and colleagues were perceived by employers to be unsympathetic and resentful. Employers described having to implement accommodations discreetly where possible to manage colleagues’ responses.

“Between the supervisor and maybe one or two people so it’s not a big public declaration that this person is getting special treatment. I think you can make it too public and that’s being honest. Because it’s an inherent thing with people- if they see someone getting the easy option, they’ll say why can’t I have it and they’ll note there’s special treatment going on” (Emp003)

Both employers and HCPs reported a lack of confidence in their ability to facilitate the work participation of an employee with an MSD due to lack of knowledge and training.

“I suppose I’ve done no formal qualifications really...so it’s lacking in knowledge really. So if you were to ask me now to cite off legislation I couldn’t do it” (HCP001)

“I probably have minimal training maybe over the years I might have gone to a seminar on health and safety in the workplace and things like that. They don’t really deal with how you deal with a staff member that hasn’t come back...for example someone has X amount of sick leave and once they’ve exhausted that I wouldn’t know where to go” (Emp001)

Some employers noted a lack of communication or support from relevant work-related organisations.

“No, to be honest I had very little contact from anyone or any organisations in terms of managing my employees...very little information at all” (Emp003)

“I’m not aware that they really support me, the only support we get possibly is processing the disability cheque if the person is out sick” (Emp004)

Across the interviews with HCP’s and employers pockets of good practice were identified. Many HCP’s described being aware of the need for early identification to prevent work absenteeism and described the use of patient oriented booklets in education and the use of specific work related outcome measures.

“I suppose just looking at the evidence around work instability and the high rates of it with musculoskeletal disorders. Just the importance of early identification of someone who is at risk of work instability is really important...I often use the workability index” (HCP001)

Frequently varied practice was reported by HCP’s, for example some considered liaising with employers as routine practice and others questioned if it was within the scope of their role.

“I ask the patient if it is okay to contact their employer. And I would normally deal directly with the employer by either a phone call or generally more often a report” (HCP003)

“I haven’t liaised with employers over the phone. I do think it’s important but I don’t think OT’s are very well placed to do that role” (HCP001)

Many employers were willing to implement accommodations recommended by professionals and recognised the need for good rapport between employee and employer to support the workers' return to or and continued working.

“I think the first thing is obviously if there is a sense that the company feels they're looking after them. Showing genuine concern and if you don't show that you've lost the connection. You've to treat everything at face value, its genuine. And try and get that rapport going” (Emp002)

Most employers reported making an effort to liaise with an employee on their return to work if they have been absent due to pain. For some this involved a formal, structured risk assessment, whilst for other employers they described a more relaxed, informal and conversational approach.

“if the person is out then obviously that risk assessment is done when the person comes back to ensure they're able. And I'd also be very particular on their certs that come back from their doctor” (Emp001)

“Really on a one to one individual case. When they come back then you just check is everything okay, are you comfortable with taking on the workload you have or do you need to take flexi time or whatever” (Emp003)

Both employers and HCP's identified organisations, resources and experts in the area that facilitated them in supporting the employee within work.

“Right now we're members of IBEC so we certainly look for guidance when it comes to these issues. Citizen's information is a huge assistance also. I actually encourage staff and ourselves to use it in the HR department” (Emp001)

Both HCP's and employers alike acknowledged the need for further training in specific areas such as health and safety, legislation and ergonomics.

“It would be helpful if we had a guideline around the health and safety side of it, and what is acceptable and unacceptable I suppose in terms of the ergonomics and work environment for the person” (Emp001)

Collectively both parties involved in supporting the employee with pain emphasised the need for the integration of care and how care current was not in line with international standards.

“ I just feel Ireland is about ten years behind the UK in terms of an integrated care pathway, That’s it’s not just that we’re behind in knowing about the research but having a structure in place for us to implement it. So I suppose in terms of change it’d be nice I think even if there was talk about vocational rehabilitation and things like that to even to introduce the idea because it’s not spoken about” (HCP002)

Theme 3: Perceived dominance of a biological basis for pain “Once you’re back, you’re back”

HCP’s, when discussing the work rehabilitation of clients, focused predominantly on the physical drivers of pain. Thus the process was dominated by task based analysis and treatment and biomechanically orientated outcome measures.

“ I suppose it’s their ability to manage work from a physical point of view...if they’re sitting at a computer all day just ask them what their work actually involves. And from there you know if there is lifting things like that you know” (HCP003)

Workers with pain largely described biomedical or physical methods to manage their pain. These strategies were often passive and included surgery, massage or injection.

“It flared up again and again and just using deep heat and that it settled down again. Another MRI showed that it could need surgery but not now. So I just got injected but they don’t work every time” (Pp001)

When workers with pain were questioned on the relevance of the work environment or atmosphere on their pain, most reverted to how the environment did not support their identified physical strategies for managing their pain and neglected to consider how same might influence job satisfaction, motivation towards work etc.

Interviewer: "Do you think the work atmosphere or environment influences your pain in any way?"

"I suppose I feel I can't stand up and walk around or walk out and say I'm going downstairs as often as I'd like to, or that I'm taking a five minute break and that may influence my pain" (Pp012)

Both employees and employers noted a presumption surrounding the prospect of being fit for work. In being physically present for work it implied a physical capacity to complete the work task for employees and employers alike. There was a lack of suggestion of other factors that may influence the capacity of work including pressure for work task completion, stress or anxiety.

"If you were going back to work you would have to be fit to do whatever may come your way...you hit the ground running and that would be it" (Pp002)

"When the teacher is fit enough to return to work we would assume then that they can continue with their duties" (Emp004)

In comparison to the other stakeholders studied, amongst the recruited HCP's most has a regard for the barriers involved for employees in pain when trying to retain or return to work.

"It's a bigger factory or a bigger plant you're just a cog in the wheel and that's form working with a couple of women in particular. They really feel like they don't have an identity or a relationship with their employer if they aren't able to do the forty hour a week job, they'll be gone, they'll be sacked and someone else will be there" (HCP001)

"How the job is at the time, how their work environment is...most individuals that would be a deciding factor for them" (HCP009)

Theme 4: The ominous nature of occupational health

This theme relates to the broadly negative experiences of employees and many employers of engaging with occupational health. Employees report a reluctance to engage with occupational health and negative outcomes resulting from engagement with occupational health. Employer's views on occupational health were related to their understanding of MSK conditions.

The majority of employees described purposely limiting their engagement with HR and occupational health services to avoid unintended negative consequences.

“My manager has gone through what’s happened but it won’t go any further. Sometimes if you brought attention to yourself it might be the worst thing in the world. Cos they might start moving you around. You don’t want that either.” (Pp007)

Many participants were unaware of the availability of a formal occupational health service and could identify ways in which an occupational health service could be useful to them.

“I just felt if they had sat me down and discussed and asked me how we can go forward, you’ve got his diagnosis...sorry to hear that...is there any way we can accommodate you. But there was no discussion from my manager anyone else around that...they didn’t really want me back” (Pp005)

Amongst employers, a comprehensive understanding of MSD's was linked to awareness of the benefit of occupational health assessment and intervention.

“there’s a real understanding that just saying someone is fit for work is no longer adequate, they’ve got to sort of assess the task and what particular tasks they may or may not be fit for “ (Emp003)

Employers who perceived the employee with an MSD as having little capacity for improvement tended to struggle to identify how occupational health services could be useful.

“Every time she’s out you keep getting colleagues say you need to refer her. And you don’t need to refer her, it’s the same condition, it’s not going to change” (Emp001)

Employee's negative experiences of occupational health services included concern about the communication between employers and occupational health and receiving upsetting feedback from occupational health on their work ability.

"I haven't heard from my manager since 2007. I actually have the email where she sent me an email asking how I was doing...look forward to seeing you and meeting for a coffee and that's literally the last I ever heard from the employer. My feeling is that when she got her report that I was written off.

They just never bothered with me" (Pp008)

" All I remember from having the assessment and the meeting with her and it took about two hours and I remember coming out in tears walking down Grafton street, because she said to me, look this isn't going to be easy, but I don't think you're ever going to be able to do your job again" (Pp007)

3.5 Discussion:

The primary objective of this study was to gain an insight into the experiences of key stakeholders involved in the work participation process for those with MSD's. This comprised of workers, health care professionals and employers. Participants described a narrow, biomedical view of MSD's and an overall lack of understanding and knowledge on how best to engage with or seek support for continuing to work or supporting a worker in with an MSD to return to or continue working. A need for further training was identified both by employers and those working within healthcare, due to an acknowledged lack of insight and understanding of MSD's. It was this that workers in the study identified as the main causative factor in the perceived stigma they described and experienced.

Workers described concealment of symptoms, continued working despite pain and a resistance to engage with support networks available to them and for many, these actions seemed to stem from a perceived stigma. Perceived stigma is described as 'the awareness, legitimisation and application of

societal stereotypes of the particular diagnosis to the self, which may result in decreased self-esteem and self-efficacy' (Corker et al, 2016). The presence of a perceived stigma is well established in CLBP (Slade et al. 2009), and in a recent study by Corker et al, (2016), the prevalence of a perceived stigma was there of 25% amongst a population of those diagnosed with rheumatoid arthritis that were studied. The reported internalised stigma was experienced to that of a 'severe' level in those that reported same (Corker et al, 2016).

Of note, for the workers recruited as part of this study, a significant proportion described an internalised or a perceived stigma. The ramifications of this are of concern as stigma has been described as being potentially disabling and restricts the persons capacity to seek care and engage with rehabilitation processes- overall limiting their engagement in society (Slade, 2009; Cohen et al, 2011). This is evident in findings within this research in which participants rarely engaged with occupational health and when reflecting on HCP interactions they were largely perceived as being negative. National pain societies within previous studies have suggested comprehensive education for HCP's to aid with the deligitimisation of people with pain (Cohen et al, 2011). At a local level the role of HCP's and in particular support groups for people with pain are emphasised. The informal environment has been described as a conducive environment for those in pain to gain support, constructive advice and validation of experiences (Slade, 2009). In light of same, both employers and HCP's should encourage workers engagement with same. For HCP's in particular delivering exercise intervention for those with MSD's in a group setting may be of benefit as positioning physical exercise as the focus within this environment may allow for support to be gained from others as an implicit benefit of the backdrop of this physical activity (Slade, 2009), helping to negate the feelings of perceived stigma and overall encourage participation with helpful agencies to support and aid in recovery.

HCP's within this study described a distinct lack of confidence with regard to liaising with employers and their scope of practice for engaging in same. This finding has been noted within previous research

in which physiotherapists identified same concerns when managing the care of people with CLBP. Similarly, the clinicians theoretically endorsed the psychosocial and holistic approach to management but without specific training they were not evidently implementing same (Synnott et al, 2016).

Within recent research there has been a call to reframe the care offered by HCP's to those with non-traumatic musculoskeletal pain and to focus on the psychosocial dimensions of pain (Lewis and O'Sullivan, 2018). The authors note that the principles of management for those with MSD's should not differ from other chronic diseases and they acknowledged the need for integrated, multidisciplinary care with a willingness on all parties to engage with same process and possess the adequate resources and training to do so (Lewis and O'Sullivan, 2018). The call for an integrated care pathway as suggested within this research commentary was highlighted by HCP's within this study as a need to facilitate the improved rehabilitation of workers with pain.

When discussing assessment and management approaches within this study, HCP's failed to acknowledge the role of addressing patient beliefs and related belief systems. The predominant biomedical beliefs amongst workers recruited in this study warrant an exploration by HCP's in practice as same can guide prognosis related to physical and mental health outcomes (Baird and Sheffield, 2016). Many therapists are now trained in behaviour change within the Irish context and addressing belief systems and implementing behaviour change as part of the assessment and treatment process may serve to maximise interactions with this patient population and improve clinician confidence (Walsh and Radcliffe, 2002).

Absenteeism and cost were big drivers for employers with regard to their management of workers. Whilst these concerns are well placed (Vos et al, 2012), this approach only serves to feed the vicious cycle of stress and pain for the worker due to the perception of a perceived pressure placed on them to remain at or return to work, despite pain. The benefits of a healthy workforce are well established in

the literature (Cancelliere et al, 2011) but poor awareness of same was noted in the employers recruited as part of this study. Employers predominantly focused on reducing rates of absenteeism and related health and safety approaches to reduce the immediate threat of injury to an employee. An emphasis was placed on health protection throughout, through occupational health.

This practice may stem from an employer uncertainty of their corporate responsibility related to the personal health of the worker and their reluctance hence to direct employees outside their perceived scope of practice (Van Berkel et al, 2014). Employers actively assumed responsibility in relation to occupational health and safety, however the onus and/or need for employers to address broader health and well-being at work for the worker remains uncertain within the research and unestablished within this research (Pescud et al, 2015). The approach adopted related to occupational health and safety was biomedically driven and single faceted. In light of same, existing research has called for educational campaigns to educate employers on what constitutes health and well- being for the workers beyond the remit of occupational health safety to promote a holistic approach to work retention rather than an approach to absenteeism that is guilt driven and punishing for the worker as described within this study (Pescud et al, 2015).

Workers within this study described a limited awareness and/or engagement with occupational health. For the minority of workers that did engage with the service, it was primarily perceived as intimidatory. Occupational health traditionally is a service in place for the support of the employer over the employee and this is emphasised by existing guidelines (IBEC, 2011; Health and Safety Authority, 2013). There has been limited research to date on the benefit of occupational health for the employee with a disability. As described by Pescud et al, (2015), there is a clear role for the promotion of health and well-being at work and this may service better to support the work retention and work morale of the worker. Occupational health may in future consider health promotion as an extension of their strategy in supporting the worker.

3.5.2 Strengths and Limitations

There are a number of methodological considerations that may adversely influence the generalisability of the research. Firstly, the findings presented are qualitative in nature and it may be argued that is not possible to generalise the information provided outside of that of the participating sample. However, the thesis objective in this instance was not for generalisability but to understand in depth, the experiences of those key stakeholders involved in the return to or retention of work. The similarities between our research and others internationally suggest our results do not just reflect local issues.

The sample size limitation relative to the recruitment of both employers and HCP's must be highlighted. The authors acknowledge there was reluctance within these two stakeholder groups to participate, resulting in low final numbers being recruited. This might reflect the fact that this remains a difficult topic for employers and HCP's to engage with. Secondly, particularly in the case of the employees and HCP's recruited, their responses may have been influenced by social desirability. This may have resulted in inaccurate reporting of perceptions despite assurances of confidentiality. That said, the study may provide clear guidance for future training initiatives for the stakeholder recruited and may guide and inform future assessment principles for HCP's in rehabilitated the workforce presenting to clinic with pain.

3.5.3 Research Implications

Future research should consider exploring the perspectives of non-injured employees and their experiences of working with colleagues with a disability; this may inform strategies to address the stigma experienced by workers in pain. Fear of litigation amongst employees and other stakeholders was not explored within this study and may be worth exploring how such dynamic effects the work rehabilitation process for those involved. To further explore the development of interventions in this qualitative research using focus groups in which three participant demographics (workers, employers and HCP's) are represented may be useful as the noted need for change in approach and practice, the

feasibility of same and the related barriers could be discussed at group level. This dynamic may serve to introduce some original thought processes around work retention and rehabilitation that have not been explored or considered to date.

Within this study there was noted contrast in some HCP's adopted approach to the assessment and extent of intervention that was offered specific to work rehabilitation. Whilst the reason for such contrast in approach was not explored in detail in this study it may be worthwhile within future research to contrast the practice of novice vs. experienced practitioners in the field of RTW so as to inform future training and learning for the profession,

As emphasised by O'Sullivan et al, (2005), little focus is often paid within return to work related research to the work related psychosocial risk factors external to that of the individual e.g. social integration, social support. That said, limited research does exist that interventions provided by supervisors or those within occupational health positions can effectively target such workplace orientated psychosocial factors (Schultz et al, 2002). Thus future research should consider examining the confidence of work rehabilitation stakeholders to address such psychosocial dimensions relative to work rehabilitation. This research should also examine that once addressed, does this have a direct effect on the success of rehabilitation programmes and outcomes.

3.6 Conclusion

Irish vocational rehabilitation stakeholders do not report awareness of the complex interplay of biological, psychological and social factors influencing work participation for people with MSD's. Vocational supports and services are hampered by role uncertainty and lack of coordination and consequentially contribute to adversarial experiences for service users. Further training needs are emphasised for both HCP's and employers so as to improve the return to work interventions and

interactions offered to the injured workers and better facilitate an early, successful return to or retention of work.

Chapter 4: Rounding Discussion

This thesis aimed to examine the experiences of work participation for workers with an MSD and explored the experiences of other key stakeholders relative to their role in supporting work retention or return to work for those with an MSD. The review in this thesis identified two major issues: (1) employees with back pain feel largely unsupported with regard to enabling and maintaining work participation and (2) employees perceive that rehabilitation professionals and employers are focused on symptoms related to LBP and the work task rather than the emotional well-being and coping skills of the employee with LBP. Within the second interview study (chapter 3), across all stakeholder groups biological factors were most implicated as the reason for work absences and the resolution of symptoms was identified as the single greatest enabler of return to work. Although pockets of good practice were identified (e.g., awareness of existing supports within Irish structure for workers in pain, a willingness to speak with employers re modifications, use of work-related outcome measures) in the main, health professionals and employers describe uncertainty about their role and responsibilities and describe a narrow scope of practice. Patients report a mostly adversarial experience of vocational supports (e.g. Occupational Health services). Mirroring international research, Irish work rehabilitation stakeholders do not report awareness of the complex interplay of biological, psychological and social factors influencing work participation for people with MSD's.

Workers

Overall, the experiences of workers with MSD's in both the synthesis (chapter 2) and the original research piece (chapter 3) very much mirror the experiences of many ill or injured workers described within previous research. For many workers that are injured or have sustained an injury, the return to work process and the maintenance of work in light of the injury is described as a complex process and extends beyond concerns related to the physical injury alone (MacEachen et al, 2006; Andersen et al, 2012). An emphasis is placed on social perceptions and the complexities related to social support,

work dynamics and the related work environment (MacEachen et al, 2006). The perceived roles, beliefs and perceptions of other stakeholders amongst injured workers are highlighted and this perceived stigma remains as a significant challenge for most workers due to doubting the reality of their own pain (Slade et al, 2013; Bunzli et al, 2013). For many workers within this research and in previously published research (Andersen et al, 2012), the return to work process was very much informed and influenced by past and present experiences with colleagues, with the work environment and with managers and was always marred with an anxiety for the future and their potential future work performance in light of injury.

For many injured workers, and highlighted within the interview study (chapter 3) as part of this thesis, there is a preoccupation placed on both the physical and social restrictions that pain has imposed on them as a person and as a worker. This is despite a belief and acknowledgment that work is good for them and that there were real benefits associated with continued working. Patel et al (2007) draws attention to the repeated reinforcement of disability that workers and people with pain often experience due to the interferences that pain has on their daily lives and the physical compromise imposed on them by pain. Pincus and Morley (2001) elaborated on this further in a model in which they described pain, illness and self as being intertwined. Within this model the authors highlight that individuals' capacity to self-identify as a worker or a contributing citizen is marred by a disabling image of self.

There are noted similarities between the patient experiences denoted within the synthesis (chapter 2), the interview study (chapter 3) and previously published research. Of note however, are the differing policies and available financial supports for the injured worker. Within some countries there is available financial support and worker compensation which offers financial assistance for those attempting to return to work (Linton, 1998). Saeki et al, (1995) noted that those in receipt of public income support are often less inclined to return to work than those in receipt of private schemes. This is representative of what is happening in the Irish context at present. Due to an absence of worker compensation, workers in the interview study described favouring the simple strategy of remaining on

benefits often due to the perceived complex nature of the benefit system and the risk of losing same benefit if a return to work was not successful or sustained.

Health Care Professionals

Collectively, from insights gained from both the synthesis and interview study, workers with an illness or injury noted a difficulty with regard to the insight required to decide whether they were able to continue working or return to work and denoted little enlightenment from their interactions with HCP's or occupational health to inform this decision. Research related to workers with other chronic conditions have highlighted this same point, in which there is very little meaningful interaction or coordination between social and rehabilitation systems and thus the guidance for many workers is absent on how they and their employer can support successful work participation (Andersen et al, 2012; Stergiou-Kita et al, 2014).

The findings related to stakeholders experiences of managing and supporting the worker in pain specific to the Irish context explored within the interview study (chapter 3), mirror much of the international literature in which HCP's and employers self-identify insufficiencies related to their capacity and knowledge on how best to support the worker in pain (Baril et al, 2003). In a previous study by Shaw and colleagues (2006), prominent risk factors were identified that were related to a high risk of prolonged work absence and/or disability. For the most part, the majority of risk factors identified were modifiable factors associated with the person and/or the work environment, that with appropriate intervention were amenable to input both from the HCP or the employer. Shaw et al, (2006) highlighted that these modifiable risk factors should be considered when rehabilitating an individual to work and unfortunately were often not considered within this research or existing research to date amongst employers or HCP's (Shaw et al, 2006).

De Vries et al, (2011) denoted that workers who stay at work and are successful in doing so, place a large value on work and have the intrinsic motivation to maintain same. This strong motivation orientated toward work helped workers to strive for aims in life, including continued working, and

thus a desire to stay in work was recognised by the authors as an important prognostic factor and influenced the outcome success for interventions offered from HCP's (de Vries et al, 2011). It has been noted that for workers not working, many may have the intrinsic motivation to stay in work but have failed to identify, or access practical strategies to support this intrinsic motivation. Thus it has been suggested that motivational interviewing techniques and educational talks with input from workers or colleagues remaining in work with pain on self-management may be of benefit as part of rehabilitation process as implemented by the HCP (deVries et al, 2011).

Previous research noted that pain acceptance in which workers were not dominated by their pain but worked despite pain is seen as a success factor related to the maintenance of work participation (deVries et al, 2011). Thus, in addition to the strategies identified above, HCP's may consider an ACT (Acceptance Commitment Therapy) approach with workers in which the reality of pain for workers is transformed and workers are encouraged not to yearn for the resolution of pain but to learn to deal with the reality of it and focus towards the successful completion of daily tasks, including work, despite it (deVries et al, 2011). These strategies may help to bridge the identified deficit experienced by HCPs within this current research related to the practical strategies that may be implemented as part of the rehabilitation of the worker at a time of work absence.

Employers

The early facilitation of return to work after illness or injury and related sick leave is emphasised in order to support the workers' quality of life (Hoefsmit et al, 2016). The role of the supervisor, manager or employer in supporting work participation and RTW are well established within previous research and include liaising with occupational health authorities, the implementation of work adaptations and facilitating communication between all relevant stakeholders (Johnston et al, 2015). The deficits in coordinating the above duties as highlighted within the synthesis (chapter 2) and the original research piece (chapter 3) are echoed within international research (Johnston et al, 2015; Hoefsmit et al, 2016). Employers surveyed within previous research identified key competencies related to, and required for

the early support of the worker. These included conflict management strategies, legal obligations of the role and communication pathways and skills (Johnston et al, 2015). Training developed based on these competencies has been acknowledged by employers as being worthwhile if offered to improve the effectiveness of interventions between the employer and the sick listed employee (Johnston et al, 2015). Delivering specific training comprising these competencies to the employer within the Irish context may be of benefit to improve their perceived confidence related to their management of the worker in pain and may serve to improve the alignment and cooperation between the social and work orientated rehabilitation supports which are so often identified as being mismatched both by injured workers and work related stakeholders (Anderson et al, 2012; Hoefsmit et al, 2016)

Training

Emphasised through the two studies conducted as part of this thesis is the identified significant training need for both HCP's and employers so as they can best be facilitated in supporting employees in remaining and returning to work. Whilst there is existing guidance documents and legislation established within the Irish context (Bevan et al, 2009; The Institute of Public Health in Ireland, 2012) for many HCP's and employers these are inaccessible and irrelevant to the practical work context and work environment. It is suggested that elements of the practical strategies and competencies identified above through this discussion be implemented at modular level within training courses for HCP's and managers/employers respectively so as to standardise the links between these personnel to best support the employee in pain.

Future Directions

The stigma experienced by workers in this study is well reported throughout previous research (Bunzli et al 2013; Slade et al 2013) and in light of same there has been a recent call for public awareness campaigns to change the way in which chronic MSD conditions are viewed (O'Sullivan and Lewis, 2018). It was recommended through this research that the public be offered information relative to the physiology of these conditions such as is currently offered for heart disease and diabetes. The benefits

of public education for the worker with an MSD are two fold- one, it may serve to assuage the perceived stigma experienced by workers if they perceived there were better public awareness and understanding of their physical and psychosocial restriction imposed on them by the pain. Secondly, a public awareness campaign may serve to improve the knowledge of key stakeholders involved in the retention or return to work process and they may be better willing to engage with external parties if they are confident in their own knowledge and understanding of MSD's. The interview study of key stakeholders completed as part of this thesis (chapter 3) underlines and emphasises the distinct need for education related to MSD's within the Irish context in the future and the approach suggested by O'Sullivan and Lewis (2018) should strongly be considered by public health and occupational authorities.

The use of qualitative research in this thesis as the primary research methodology is both novel and justified as in recent years qualitative research has been weighted with a capacity to provide key insights necessary in the generation and updating of social policy (Becker, 2012). The insights gained through this project potentially may benefit the employer, the employee, the Irish economy as a whole. Addressing the MSD challenge through insights from key stakeholders could aid in reducing absenteeism and produce real and significant savings to the exchequer and the individual as witnessed in other countries.

Relative to the service coordination and welfare systems in place at present in Ireland, these systems should be examined more carefully to establish how these existing structures may influence the return to or retention of those with MSD's. Whilst these systems were mentioned by participants as part of this research (chapter 3), an in depth exploration of same was not achieved in this thesis or a causative relationship established relative to participation levels. However, the results from the multi-stakeholder interviews highlighted that an issue remains around people with MSD's needing to be believed that they have real pain and having to prove they are sick or disabled to get entitlements within these existing systems in Ireland. Thus, within future research there may be value in exploring

how best to set up such systems so that such issues experienced by people with MSD's and other disabilities are minimised.

Strengths and Limitations

Whilst saturation of data was gained within the thesis relative to the research question in the original interview study, the extensiveness of the data collected is limited due to the overall small numbers of stakeholders that were recruited. Whilst results are representative, within future research it may be important to consider the recruitment of varying HCP's such as GP's, allied health and occupational health so to establish differences in approach and to inform training needs or practice from data collected.

Secondly, social protection systems in Ireland were mentioned by participants in this study but an in-depth exploration or causative relationship on participation were not established as part of this research. Future research may consider recruiting those working within the department of social protection to establish the process involved in supporting those out of work due to disability and exploring further workers experiences and perceptions of same.

Through the synthesis of existing research in chapter 2, it was noted by the author that experiences of disclosure and discrimination may be different depending on industry and/or geographical location. Given the variation in reporting within the synthesis this pattern of practice was not easy to support / refute. Further research may consider directly comparing workers experiences of stigma or discrimination within different work practices and environments and determining if a correlation exists.

From this research it was determined that intervention relative to best supporting those in pain to retain or return to work is important in various formats. However, the timing of same along the work participation journey was not established i.e. if intervention should be offered early in light of disability. Further research could examine the timeliness of such intervention to guide employer

practice to maximise effectiveness and success of such interventions. Future research should explore when best to offer or implement interventions along the worklessness timeline/ process.

Chapter 5: Conclusion

This thesis aimed to: (1) Synthesise the available qualitative literature on the experience of workforce participation amongst workers with low back pain (LBP) and (2) Examine the work rehabilitation and retention experiences and perspectives of people with musculoskeletal disorders (MSDs), employers and health professionals. The thesis aims were oriented towards enhancing understanding of how to address the immutable challenge of reducing work disability rates among people with MSD's through communication, collaboration and coordination between the individual, the workplace and healthcare providers. A qualitative meta-ethnography and a qualitative interview study were conducted to address the thesis aims. The findings of this thesis suggest that employees with back pain bear a heavy burden of stigma, symptom management and self-management and feel largely unsupported in the workplace. Employees, employers and rehabilitation professionals are overly focused on symptoms related to LBP and the work task rather than psychosocial factors. Although pockets of good practice in Ireland were identified, in the main, health professionals and employers describe uncertainty about their role and responsibilities and describe a narrow scope of practice and patients report a mostly adversarial experience of vocational supports such as Occupational Health services. Stigma is a key barrier to work participation for people with MSD's therefore stigma reduction initiatives focused on back pain and MSDs should be developed and evaluated. Specific training and skill development among employers and HCPs is recommended to build competence in supporting employees with MSD's to return to and remain in work.

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Appendices

Appendix 1

The Employment- Based Experiences of People with Low Back Pain: A Qualitative Systematic Review and Meta-Synthesis

Search term A: (Qualitative)

interview* OR “focus group*” OR thematic OR theme* OR experience* OR narrative* OR qualit*
OR “life-story” OR “interpretati*” OR “Discourse analysis” OR “Grounded theory” OR “content
analysis” OR ethnograph* OR epistemology* OR phenomenolog* OR fieldwork OR “participant
observation*”

AND

Search term B: (Work)

Unemploy* OR Work* OR Employ* OR “Work outcome*” OR “Work function*” OR “Readiness to work”
OR “Work ability” OR “Work disability” OR “Work participation” OR Workplace OR vocation* OR
occupation* OR job* OR labour* OR industr* OR “work status” OR “stay at work” OR “work attendance” OR
“work capacity” OR “work performance” OR presenteeism OR “Return to Work” OR “sickness absence” OR
“sick leave” OR absenteeism OR retire* OR pension* OR benefit* OR welfare*

AND

disab* OR pain OR muscul* OR inflamm* OR stiff* OR discomfort OR disorder* OR injur* OR “repetitive
strain*” OR “back complaint*” OR “back problem*”

Databases:

A) EBSCO:

Including: Academic search complete, AMED, Biomedical Reference Centre, CINAHL, Medline, PsychInfo,
PsychArticles, SportsDiscuss, UK and Ireland Reference Centre

B) Web of Science

C) Scopus

Limiters:

- Year 1980-2016
- English Language Only
- Limited to journals, academic journals and dissertations

Inclusion/exclusion criteria:

- Studies are required to have a qualitative method or component. Mixed-method studies are eligible only if the qualitative data is analysed separately to the quantitative data.
- Studies are required to investigate patient's perceptions of their **employment based** experiences of working with low back pain, even if they are currently off work, in receipt of disability payment or retired with pension. This implies that studies must have explored the experiences of those who have had some period of time with pain at work to be eligible.
- Studies investigating the perceptions of patients with other participant demographics (e.g. health care practitioners) will only included if the perceptions of the patient are analysed separately to that of the health care practitioner.
- Surveys with open-ended questions will be excluded.
- Qualitative studies in which employment based experiences of the patient were not explored and that solely discussed patient perceptions of sickness absence or the return to work process will be excluded.
- English studies only

Appendix 1A



Interview Schedule

To explore the experiences of people with musculoskeletal disorders (MSD's) at work or who are currently on sick leave for <6 weeks, and to examine their self-perceived barriers and enablers of work participation.

Can you tell me about your education and work history

What is your current employment? (employer, position, hours of work, duties, & typical tasks).

Can you tell me about your work environment? (physical space, colleagues, atmosphere and manager)

Can you tell me about your MSD (back pain / arthritis etc)? (when was it diagnosed, how does it affect you day to day & what you do to manage the troubling aspects of your condition).

Have you ever been on sick leave because of your MSD condition? If yes, can you tell me about that experience; what factors led to you being signed off sock from work, how did your GP, employer, family and colleagues react? Can you describe the process of going back to work after sick leave?

What are the factors that enable you to continue working with your MSD condition from your perspective?

What barriers / obstacles to working with your MSD condition have you experienced?

Prompts; work ethic, motivation to work, financial incentives, social welfare incentives, expectations of family, friends and others, relationship with employer and colleagues, satisfaction with job, symptoms, and workplace factors.

- To examine employers' experiences of recruiting, managing and retaining employees with MSD's at work.

Can you tell me about your current role and responsibilities?

Can you tell me about the organisation / company?

What training education have you received around management of health conditions in the workplace?

Can you tell me about your experience of recruiting, managing and retaining employees with MSD's?

What factors do you think influence whether a person with a MSD will continue working or need sick leave / retirement?

Do you think the characteristics of the individual / the work task/ the work environment/ relationship with colleagues & employer affect whether a person with a MSD will continue working or need sick leave / retirement?

What responsibilities do you have when managing an employee with a MSD?

Do you feel confident about managing employees with an MSD?

What supports are available to you in managing an employee with a MSD? (Occ Health, Unions, Organisation policies)

How does employment legislation influence your management of a person with a MSD?

How do social services (e.g. Social Welfare system) support you in managing an employee with a MSD?

What training / information needs do you have in relation to managing employees with MSD's?

-To explore health care practitioners beliefs about the barriers and enablers of work participation.

Can you give me an overview of your work setting and typical case load?

What proportion of your case load is comprised of people with MSD's?

Do you routinely ask people with MSD's about work as part of your assessment?

Do you complete any specific work assessments with people with MSD's?

Is return to work / retention of work an outcome that you consider in treatment?

If yes, how do you address work as part of the service you provide? (work hardening, FCE, site visits, return to work contracts, negotiation with employer)

Who in the MDT is best placed to address work with clients with MSD's in your opinion?

Do you feel confident about addressing work with your clients?

What information / training needs do you have in relation to meeting the work related needs of your clients?

What supports are available to you in addressing work with a client with an MSD? (Occ Health, Unions, Solas, Employability, NLN)

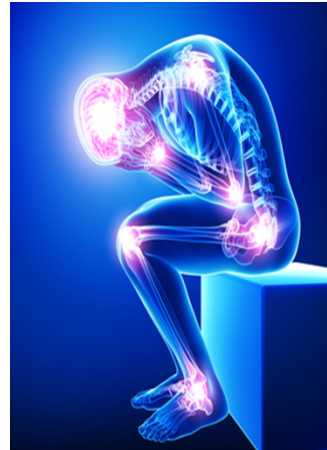
How does employment legislation influence your management of a person with a MSD?

How do social services (e.g. Social Welfare system) support / hinder people with MSD's in returning to / retaining work?

What factors do you think influence whether a person with a MSD will continue working or need sick leave / retirement?

Do you think the characteristics of the individual / the work task/ the work environment/ relationship with colleagues & employer affect whether a person with a MSD will continue working or need sick leave / retirement?

Are you an employee with back pain / arthritis / a musculoskeletal condition?



We are looking for volunteers to take part in a study about working with a Musculoskeletal condition

If you have any concerns about this study and wish to contact someone independent, you may contact:

The EHS Research Ethics Contact Point of the Education and Health Sciences Research Ethics Committee, Room E1003, University of Limerick, Limerick. Tel: (061) 234101 / Email: ehsresearchethics@ul.ie

If you are currently working or are on sick leave from your job and have a musculoskeletal condition (e.g. arthritis, fibromyalgia, back pain, neck pain, shoulder pain) we would like to hear about your experience through an interview with a researcher at a location convenient to you.

If you wish to take part, please e-mail/call/ write to Aoife Synnott:

Aoife.synnott@ul.ie

Full contact details :

Tel: 061 213370,

Department of Clinical Therapies,

Health Science Building,

University of Limerick.



Study Title: Taking the **Pain Out** of **Work:** *Taking the Pain Out of Work: Exploring the Barriers and Enablers of Work Participation*

Should you choose to take part in this study, please read the statements below and sign if you agree to all statements made.

- I have read or had read to me by another individual, the relevant information given to me and fully understand its content.
- I understand what the project is about, what it involves, and how the results will be used.
- I understand that what the researchers find in this study may be shared with others but that my name will not be used.
- I have been given the opportunity to ask questions and to express my concerns.
- I am fully aware of what is involved, and of any risks and benefits associated with the study.
- I know that my taking part is voluntary and that I can withdraw from the project at any stage without giving a reason.
- I consent to my involvement in this research project after agreeing to all the above statements.

Name: (please print): _____

Signature: _____

Researcher's Signature

_____ Date: _____

This research study has received Ethics approval from the Education and Health Sciences Research Ethics Committee (quote approval number). If you have any concerns about this study and wish to contact someone independent you may contact:

Chairman Education and Health Sciences Research Ethics Committee

EHS Faculty Office

University of Limerick Tel (061) 234101

Appendix 4



Information Sheet for Participants.

Study Title: Taking the Pain Out of Work (POW): *Taking the Pain Out of Work: Exploring the Barriers and Enablers of Work Participation*

What is the purpose of this study?

Musculoskeletal disorders are extremely common and include arthritis and back pain. People with Musculoskeletal disorders frequently have high rates of sick leave from work and often stop working altogether. Research has shown that employment is good for people's physical and mental health. Long term unemployment is associated with poverty, social exclusion, poorer physical and mental health and reduced quality of life.

When people with musculoskeletal disorders leave work, or are on sick leave from work the economic costs in Social Protection payments are very significant. International research indicates that early intervention (before job loss) and interventions which help people to manage troubling aspects of their condition (for example fatigue and pain), alongside negotiating with employers can reduce the numbers of people with musculoskeletal conditions leaving work.

Therefore, although a lot is known from international studies about how to prevent people with musculoskeletal conditions leaving the workforce little is known about how these interventions translate to the Irish context. In this study we will consult with a range of stakeholders including people who are working with back pain and arthritis and employers and health professionals. The views of these stakeholders will be used alongside research completed by the group previously to develop an intervention.

What will I have to do if I take part?

Your participation in this study will involve a single recorded interview with the researcher. It is estimated that this interview will last approximately 60 minutes. The interview will take in a private room on your work premises or via telephone/Skype, depending on your preference and availability.

What are the possible disadvantages/risks of taking part?

There are no identified risks to participating in this study.

What are the possible benefits of participating in this study?

The results collected from the study may help to inform future interventions to help employed adults with musculoskeletal disorders to remain in work.

Do I have to take part in this study?

It is important to note that participation in this study is voluntary and you are not obligated to participate. You are free to withdraw from the study at any time.

What will happen to the results of the research study? Who will have access to them?

The information collected as part of this study will be coded, and all identifiable details related to the participants will be removed to ensure anonymity and confidentiality. The data will be stored in accordance with U.L procedure and only the researchers will have access to the data. The data will then be written up and presented as a research paper and may also be presented in a published research article and at conferences. A copy of this project will be available to you upon completion of the study via email.

What if there are problems or I have any questions after partaking in the study?

If you have any questions please do not hesitate to contact us. Contact details of both researchers are detailed below.

Principal investigator:

Dr. Katie Robinson, Department of Clinical Therapies, University of Limerick. Email: Katie.robinson@ul.ie
Tel (061) 213370

Other investigator:

Aoife Synnott, Research Assistant, Department of Clinical Therapies, University of Limerick, Email: aoife.synnott@ul.ie

This research study has received Ethics approval from the Education and Health Sciences Research Ethics Committee (quote approval number). If you have any concerns about this study and wish to contact someone independent you may contact:

Chairman Education and Health Sciences Research Ethics Committee

EHS Faculty Office

University of Limerick

Tel (061) 234101

Appendix 5

Node list development

workplace culture of support for recovery , early return etc ethos or culture of supporting employees with disabilities
workers unions as a challenge in RTW from employer perspective
work causing pain fatigue
using sick leave to adjust to diagnosis
unsatisfactory experiences with HCPs
union representing voice of the employee
transport as a barrier to RTW
training needs
strategy to manage work good medical care or services
strategies used to manage work with pain
strategies to manage sick leave e.g. reschedule lectures
specific work issues creating barriers to working with an MSD inflexible schedules etc
social consequence or stigma of being out of work or on sick leave
silos
side effects of medication
shame at not being able to keep up at work
self employment allows some flexibility when sick
self employed therefore have to continue working
RTW benefits both employer and employee
reluctantly took sick eave because it was absolutely necessary or avoiding sick leave although needed
relations with HCP's
Prevention oriented employer avoid accidents etc.
positives about working identity, social , fills time
positive experience of employee assistance counselling
positive experience of negotiating new role post workplace injury
personal responsibility to ensure you are fit to work
Pain as the reason for work absence or cessation
once your back your back
occ health view that sick leave can be abused by employees
Occ Health good practice negotiating, new tasks avoid forcing people back to work
Occ health getting a second opinion when there is a clash about RTW
Occ Health and GP clash
no choice but to work despite pain
motivations to continue working e.g. clients, job satisfaction,
monitoring of an organisations sick leave as an outcome for employers
minimising volume of sick leave
Losses from not working financial emotional social
little financial support for elf employed
limited support to retrain or explore other options
limited awareness of occupational health or occupational therapy accessing benefits etc
legislation and legality
lack of sympathy or understanding from others for invisible symptoms eg pain
lack of employer support or interest or accommodations or knowledge
importance of the employee - employer relationship or example of good relationship
importance of workplace culture relationships in RTW
Ideal manager or workplace or work schedule
HCP working flexibly depending on the type or size of employer
HCP support for managing MSD's
HCP suggestion for services integration or suggestion for improvement or criticism of current services

HCP self reported poor practice lack of knowledge skills limited scope poor MDTs
HCP relations with employer
HCP negotiation with occ health
HCP interventions
HCP initiated work adaptations
HCP good practice asking about work broad understanding of success negotiating
HCP formal work assessment- outcome measure use
HCP focused on biology physical drivers of pain
HCP conveying doubt suspicion or notion that if people really want to try ill get on
HCP and MDT approach
guilt about continuing to work when others are being let go
GP asking patient how long they want off or patient controlling request not GP
flexible work hours schedules or other flexibility making work easier
fear of disclosure during job recruitment process or recruitment to exclude people with MSDs
fear about work consequences due to MSD
Fear about future ability to work
family supportive of employee on sick leave
family support enabling work for e.g. childcare
example of physical work task that patient cant do or description of symptoms and task implications
employer uncertainty re entitlements
employer support through equipment or appointment flexibility or emotional support
employer support for workplace injury
employer support for managing MSD's
employer striving for a culture of safety at work minding each other and employer responsibility for a safe work environment
employer recognition of psychosocial factors related to pain
employer policies causing staff upset resentment written notices etc
employer or HCP beliefs about work ethic personal motivation etc
employer legitimising reality of pain (eg drawing on own experience) and communicating belief in employee
Employer Good practice e.g. light duties accommodations early return to work, work for recovery
flexible return not Fit or not good communication
employer experiences with occ health
employer description of a malingerer
employer challenges of employee taking advantage
employer avoidance of confrontation
employer acknowledgement of employer resilience
employee concerns about disclosing
efforts to retrain
difficulty accessing information on condition
different protocols in sickness absence in different workplaces
desire to keep working to avoid being home alone. Not seeing time off as positive
continuing to work for social reasons or because of job enjoyment or work ethic
continuing to work for financial reasons
colleagues not supporting colleagues on light duties
colleague support by taking or sharing tasks or emotional support
client uncertainty about the process of rtw or just in limbo
client negative experience of occupational health
challenge of varying HCP opinions
Challenge of equity when offering accommodations
challenge for occ health being employer directed or connected and challenge of sometimes being Ax only focused not Rx

challenge for employers of offering accommodations etc unique work small employers
challenge for employer of implementing light duties
challenge for employer if condition is not known disclosed or is kept confidential
beliefs about psychosocial factors and pain and work
Belief in a biological basis for pain
being stoic about pain not talking about it or taking meds

Appendix 6: COREQ 32 Item Checklist (Tong et al, 2007)

No. Item	Guide questions/description	Section reported Chapter 3
Domain 1: Research team and reflexivity		
<i>Personal Characteristics</i>		
1. Inter viewer/facilitator	Which author/s conducted the inter view or focus group?	Results
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	Methods
3. Occupation	What was their occupation at the time of the study?	Methods
4. Gender	Was the researcher male or female?	N/A
5. Experience and training	What experience or training did the researcher have?	Methods
<i>Relationship with participants</i>		
6. Relationship established	Was a relationship established prior to study commencement?	N/A
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	N/A
8. Interviewer characteristics	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	Methods
Domain 2: study design		
<i>Theoretical framework</i>		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Methods
<i>Participant selection</i>		
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Methods
11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Methods
12. Sample size	How many participants were in the study?	Results
13. Non-participation	How many people refused to participate or dropped out? Reasons?	Methods
<i>Setting</i>		
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Methods
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	Results
16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	Results

<i>Data collection</i>		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Methods
18. Repeat interviews	Were repeat inter views carried out? If yes, how many?	N/A
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	Methods
20. Field notes	Were field notes made during and/or after the inter view or focus group?	Methods
21. Duration	What was the duration of the inter views or focus group?	Methods
22. Data saturation	Was data saturation discussed?	Methods
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: analysis and findings		
<i>Data analysis</i>		
24. Number of data coders	How many data coders coded the data?	Methods
25. Description of the coding tree	Did authors provide a description of the coding tree?	N/A
26. Derivation of themes	Were themes identified in advance or derived from the data?	Methods
27. Software	What software, if applicable, was used to manage the data?	NVivo
28. Participant checking	Did participants provide feedback on the findings?	Strengths and limitations
<i>Reporting</i>		
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Results
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Relationship to existing knowledge
31. Clarity of major themes	Were major themes clearly presented in the findings?	Results
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Discussion