Return-to-Work Expectations and Workplace Supports in New Zealand; Injured Workers' Perspectives

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ABSTRACT.

Background. Work disability owing to musculoskeletal injury constitutes an extensive and expanding health problem globally. The vast majority of costs attributed to work disability are currently associated with long-term work disability. Furthermore, the risk of developing long-term work disability compounds with increased time off work. Recent research into work disability prevention has started to investigate the predictive ability of return-to-work expectations and workplace supports as risk factors of long-term work disability. However, at this stage, the mechanisms by which they influence work disability are poorly understood.

Aims. Study one investigated existing evidence of the effects of return-to-work expectations and workplace supports on return-to-work outcomes in workers with acute musculoskeletal injuries. Study two sought to better understand how return-to-work expectations and workplace supports may be better addressed through analysing the perspectives of acutely injured workers undergoing vocational rehabilitation.

Methods. A systematic literature search was carried out and the retrieved literature underwent critical appraisal and synthesis to address the aim of study one. In study two, semi- structured interviews were conducted with five acutely injured participants who were currently undergoing vocational rehabilitation in Northland, New Zealand. Thematic analysis was used to analyse and interpret the data.

Results. The results of study one confirmed that that both return-to-work-expectations and workplace supports affect return-to-work outcomes. Furthermore, the outlining of several research gaps in the topic area from the synthesis of the literature led to the development of focussed questions that were then used to inform study two. Five themes were generated from the data in study two. "*Worker health or company wealth?"* discussed how the different priorities that companies exhibit in their decision-making and workplace culture can affect the provision of workplace supports. "*Trust underpins workplace supports"*

reported on differing forms of trust within the workplace environment and also had an influence on the provision of workplace supports. "*Workplace supports move my goal"* highlighted that workplace supports were found to influence return-to-work expectations. The influential roles medical and insurance providers played in relation to the participants' return-to-expectations was presented within "*is standard care sub-standard?". "What about the worker?"* discussed how participants' contrasting "worker" identities and perspectives of pain had an influence on return-to-work expectations.

Discussion. The findings of study one identified gaps in the research which had not yet been analysed in depth. Study two addressed these identified gaps. The effects of systemic factors and trust were found to have a bearing on the provision of workplace supports. The role of workplace supports in influencing return-to-work expectations was also illustrated. Furthermore, medical and insurance providers were shown to influence return-to-work expectations. Finally, some of the individual characteristics of the participants were shown to influence return-to-work expectations.

Conclusion. This thesis contributes to the growing body of knowledge in this research area by providing original insights into how return-to-work expectations and workplace supports can be better addressed. These findings have implications for injured workers, employers, vocational rehabilitation providers, workers' compensation systems and society. Further research investigating work disability prevention strategies will be necessary if the global problem work disability has created is to be brought under control.

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Abbreviations.

ACC- Accident Compensation Corporation

AUT- Auckland University of Technology

AUTEC- Auckland University of Technology Ethics Committee

ICF- International Classification of Health, Disability and Functioning

JBI- Joanna Briggs Institute

LBP- Lower Back Pain

MRI- Magnetic Resonance Imaging

MSD- Musculoskeletal Disorders

OPP- Organisational Policies and Practices

OT- Occupational Therapist

PRISMA- Preferred Reporting Items for Systematic Reviews and Meta-Analyses

ROBA- Risk of Bias Assessment

RTW- Return-to-Work

RTW-Ex- Return-to-Work Expectations

TA- Thematic Analysis

VR- Vocational Rehabilitation

WD- Work Disability

WS- Workplace Supports

Attestation of Authorship.

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed:

Rory McMahon Christopherson

Date: 29/05/19

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Ethics Approval.

Full ethical approval for this study was granted on the 14th of August, 2018 by the Auckland University of Technology Ethics Committee. The ethics approval reference number is 18/294.

1. INTRODUCTION.

1.1. Statement of the problem.

Injuries causing work disability (WD) constitute a substantial global burden (Young, 2010). Because of the various health, social and economic implications associated with WD, it is considered a serious public health problem, and has attracted the interest of many stakeholders, including healthcare systems, employers, governments and society at large (Pransky, Loisel, & Anema, 2011).

Musculoskeletal health is critical for human function, enabling mobility, dexterity and in turn the ability to work and perform normal activities of daily living throughout the life course (Briggs et al., 2018). Given this, it is not surprising that musculoskeletal disorders (MSD) are considered the leading cause of WD and productivity losses in the United States and in other developed nations (Dunstan, Covic, & Tyson, 2013).

Most MSD naturally resolve within the healing timeframes associated with the type of injury sustained, in allowing a full return to normal work for the injured worker (Parziale, 2001). However, a small percentage of cases (3-10%) develop long-term disability (Westman, Linton, Ohrvik, Wahlén, & Leppert, 2008) . Crucially, such long-term work-disabled cases account for an incredible 75-85% of the total costs involved with WD (Westman et al., 2008). Furthermore, the risk of long-term WD increases as length of time off-work increases, which drives an urgent need to identify and manage injured workers at risk of long-term WD as early as possible (Turner et al., 2006).

In the past, a variety of methods, mostly bio-medical or patho-anatomical in nature, have been proposed to sub-classify injured workers at risk of long-term WD (Reme et al., 2012). However, it has more recently been argued that there are few, if any such bio-medical variables that can reliably distinguish between those who return-to-work (RTW) normally, and those who go on to develop long-term WD (Sullivan & Stanish, 2003).

Within the past two decades, a surge of research investigating the utility of measuring psychosocial variables in WD has fuelled claims that such variables can be more accurate at predicting RTW than strictly bio-medical diagnostic factors alone (Reme et al., 2012). Consequentially, attention to psychosocial factors as part of a wider bio-psychosocial approach has become increasingly popular in RTW research (Besen, Young, & Shaw, 2015). However, by and large, the exact mechanisms by which these psychosocial variables may actually influence RTW remains poorly understood (Kapoor, Shaw, Pransky, & Patterson, 2006).

1.2. Thesis aims.

Two psychosocial factors that have gained increasing attention in recent research are return-to-work expectations (RTW-Ex) and workplace supports (WS) (Carroll, Lis, Weiser, & Torti, 2016; Jetha et al., 2018). RTW-Ex are defined as a worker's own expectations for their RTW (Young, Besen, & Choi, 2015), and WS are defined as the actions implemented from within the workplace that promote the timely, safe and durable RTW of an injured worker (Dunstan & MacEachen, 2016).

The aim of this thesis is to better understand the roles of these two factors in influencing RTW, and in turn WD. The research is split into two main parts with the use of two guiding research questions presented below;

Question One - What effects can RTW-Ex and WS have on RTW for workers with acute musculoskeletal injuries?

Question Two - What can acutely injured workers teach us about how the effects of RTW-Ex and WS could be better addressed in New Zealand's vocational rehabilitation context?

Question one is addressed through study one, a systematic review of the literature regarding the effects of RTW-Ex and WS on RTW in workers with acute musculoskeletal injuries. In addressing question two, study two builds from the findings of study one and

involves the undertaking of qualitative interviews with acutely injured workers in Northland, New Zealand. Study two explores what can be learned about how the effects of RTW-Ex and WS could be better addressed in New Zealand's vocational rehabilitation (VR) context. The next section gives an overview of the structure of the thesis.

1.3. Structure of thesis.

Chapter Two details background considerations relevant to the topic and is divided into three parts; Topic background, philosophical underpinnings and pilot literature review. Part I - topic background, reviews literature in relation to WD, starting with the costs and trends of WD and MSD and the relationship between employment, and health and well-being. Next, I describe the evolution of the bio-medical and bio-psychosocial healthcare models that have shaped how WD is understood today. Following this, I introduce VR, the current health service designed to address WD, and "the workplace" as the context VR is delivered within. The topic background also introduces the two psychosocial factors investigated. A further section discussing New Zealand's unique rehabilitation context with regard to its healthcare system is provided to situate study two. Finally, the topic background is summarised in highlighting where WD is currently located in the bigger rehabilitation picture, and in also providing some justification for the thesis aims.

Chapter Two; Part II- philosophical underpinnings firstly recounts my own interests that led to me eventually undertaking this thesis. A section on researcher assumptions then offers a written summary of my own assumptions about the topic that were recorded during an interview prior to the commencement of study two. Social constructivism, the philosophical approach or worldview underpinning this study, is then introduced along with thematic analysis (TA), the method used for data analysis. Within this section it is detailed how and why the social constructivist approach governs many methodological decisions made within study two and why TA is suited to this type of approach.

Finally, Chapter Two; Part III - pilot literature review describes the initial review of the literature I undertook as an entry point into the field of WD research. The challenges

encountered as part of undertaking this literature review are presented as they demonstrate the necessity for the more specific and systematic approach employed in study one in order to achieve the first aim of the thesis.

Chapter Three outlines study one - systematic literature review. The chapter describes how the review was undertaken and also how it was informed by the pilot literature review. The results of study one are then provided in a detailed summary along with reference tables. Lastly, the results are discussed along with the presentation of research gaps that are used to assist the undertaking of study two.

Chapter Four details study two - qualitative interview study. This chapter begins by illustrating the integration of social constructivism and TA within the design, implementation and analysis of the interview process. I then show how the concepts identified within study one inform the overall interviewing strategy for this study. An account of the logistical considerations inherent within the recruitment and interviewing stages are given before the methods of study two are described. The study's findings are presented as themes and are then discussed in relation to how these themes assist in addressing RTW-Ex and WS.

Chapter Five, discussion firstly summarises how the findings of study two assist in filling the gaps identified within the findings of study one. The clinical implications relating to the studies' findings are also discussed. Within the strengths and limitations section I also share my perspective of the findings in relation to the "Northland" context and my address my assumptions prior to commencing study two. Directions for future research are then outlined before a final conclusion is reached.

1.4. Significance of the thesis.

This thesis was conceptualised from the vantage point of nearly a decade of exposure to WD, experienced through the eyes of a physiotherapist involved within the VR industry. Through having witnessed and having played roles in many successful and failed attempts to prevent and manage long-term WD, this thesis is firstly a personal pursuit to

provide the answers to questions that personal experience and existing research could not give. From a research perspective it is an attempt to better organise the somewhat fragmented research relating to this topic, and also an endeavour to identify and thoroughly explore an area that has yet to be mapped out with sufficient detail. Overall, it is as much a contribution towards achieving a clearer view of a major public health issue as it is a signal to attract and network with other parties that may be able to assist in reducing the burden that WD casts upon society.

This thesis is the first known research to investigate the effects of RTW-Ex and WS whilst also exploring how these effects may be better addressed, at least in New Zealand's VR context. When considering the wider implications of these findings, they would be of interest to many stakeholders involved in RTW processes. Because of the New Zealand setting, the findings may also have particular relevance to Accident Compensation Corporation (ACC) processes along with those of other New Zealand based third-party administrators in the workers' compensation context.

From a broader perspective, these findings form a contribution towards reducing the global burden of WD. However, most importantly, these findings are presented in order to get a step closer towards providing medical, VR and insurance providers with the necessary expertise to protect workers, their families, employers and society from the consequences of long-term WD.

2. BACKGROUND REVIEW.

2.1. Part I- Topic Background.

2.1.1. Costs and trends of work-disability

In the United States alone, the direct costs of work-disabling conditions, including workers' compensation and medical costs, are reported to be $1 billion dollars per week (Marucci-Wellman et al., 2015). Factoring in indirect costs such as lost productivity and lost earnings, the Unites States spent a staggering $250 billion dollars on WD for the 2007 year alone, a health cost equivalent to cancer treatment (Marucci-Wellman et al., 2015). Within the European Union labour force, annual spending on work-disabling conditions has been estimated to be as high as €240 billion euros, which equates to nearly 2% of gross domestic product (Bevan, 2015). However, it is likely that the global burden of WD is underestimated (Briggs et al., 2018). Intangible WD costs stemming from health-related factors such as economic hardship, family stress and suffering, and reduced quality of life are rarely included in calculations as it is difficult to express such factors in monetary terms (Bevan, 2015). Furthermore, it is inevitable that a percentage of cases will go unreported (Baldwin, 2004). Currently, WD imposes a massive yet likely underestimated global burden throughout the European Union, United States, Canada, Australasia and many other industrialised countries (Dunstan et al., 2013).

Over the past two decades, numerous studies have monitored the trends of WD in several developed countries. Despite an overall reduction in the frequency of work-related MSD being reported, there has been no observed reduction in the overall burden of WD (Marucci-Wellman et al., 2015). In the early 1990's, Feuerstein (1991) reported that in the face of an observed reduction in frequency of work-related injuries, the number of lost days attributed to WD continues to rise. Nearly three decades on, studies of Canada-wide statistics still support this trend, in reporting that the overall duration of disability may still be increasing despite decreases in work-related injury frequency

(Cullen et al., 2018). In research conducted closer to home, reports indicate that RTW rates in Australia and New Zealand have remained static for the past 15 years (Cullen et al., 2018). In light of this, if the 3-10% of MSD injury that become long-term WD cases are responsible for 75-85% of the total costs involved with WD (Westman, et. al. 2008), it is reasonable to suggest that preventing the transition towards WD, in addition to efforts aiming to reduce injury frequency should also be a key target of WD prevention strategies in MSD populations.

Despite research efforts being undertaken for a number of decades now, and interest in preventative strategies being declared from a multitude of involved stakeholders, there is yet to be a significant impact made into reducing the costs being incurred by these parties, or the global burden WD causes.

2.1.2. Musculoskeletal disorders

MSD impose a large annual cost burden on healthcare and workers' compensation systems (Baldwin, 2004), being a leading cause of WD and productivity losses (Dunstan et al., 2013). Bevan, (2015) reports that MSD may be responsible for up to half of total WD costs. MSD are characterised by pain and reduced physical function and are comprised of over 150 diagnoses that may affect the musculoskeletal system (Briggs, 2016). Murgatroyd, Harris, Tran, and Cameron (2016) report that orthopaedic trauma in the form of bone fractures of the upper or lower limb have been marked as significant contributors to the burden of WD in people of working age. Similarly, management of MSD such as shoulder joint injuries has been described as an often complex and costly process for workplaces (L. Shaw, Domanski, Freeman, & Hoffele, 2008).

However, one MSD stands above the rest in its contribution to WD. Lower back pain (LBP) is the single largest diagnostic category of this group and is the population studied in a significant portion of available literature on the topic of WD (Opsahl, Eriksen, & Tveito, 2016). Turner et al. (2006) describes LBP as the most prevalent and costly worker disorder known, and LBP has been identified as the leading cause of suffering

and WD in the industrialised world (W. S. Shaw, van der Windt, Main, Loisel, & Linton, 2009). Baldwin (2004) points towards an association with prolonged and repeated spells of WD as the reason LBP is met with the highest costs of any MSD. This report is made with reference to other MSD, such as upper or lower limb fractures, which are reported to typically result in full restoration of productive capacity (Baldwin, 2004). Several reasons have been put forward in an effort to explain the causes of such prolonged and repeated spells of WD that are associated with LBP. First, there is growing support for the bio-psychosocially derived view that although LBP is commonly referred to as an injury, its association with "biologic" injury is often unclear (Turner et al., 2006). Furthermore, the now widely accepted relationship between LBP and psychosocial and work-related factors has also been offered in accounting for the notoriety of LBP (Kapoor et al., 2006; Reme et al., 2012). Despite a tendency for LBP to be dominant in WD research, Briggs et al. (2018) confirms that all types of MSD can be associated with an increased risk of developing long-term problems. For example, MSD affecting structures such as the upper limbs and neck are also commonly associated with long-term WD (Bevan, 2015).

2.1.3. Work and social health and wellbeing

Work is considered pivotal to determining and maintaining social identity, and provides financial security (Murgatroyd et al., 2016). It carries value to a person by ways of enabling contribution, participation and self-development (Fadyl, McPherson, & Nicholls, 2015). Furthermore, evidence suggests that being employed is both a fundamental determinant of, and a pre-requisite for health (Opsahl et al., 2016). Conversely, because of its influence on an individual's health and well-being, studies have also indicated that not working, or being work-disabled is associated with poorer physical and psychological health (Fadyl, McPherson, & Nicholls, 2015). WD imposes a loss of income, structure and goal-directed activities, which can affect participation and quality of life for the entire duration that a worker remains work-disabled for (Fadyl, McPherson, & Nicholls, 2015; Sullivan & Stanish, 2003). When our "need" to work in order to maintain health is considered in light of the now generally accepted view that the risk of long-term WD

increases with increased time off work (Turner, 2006), we should consider the importance of ensuring that strategies enabling RTW are being delivered as early, and as effectively as possible.

2.1.4. Out with the old: bio-medical healthcare

Biologically dependent characteristics are the focus of the traditional bio-medical paradigm of illness or injury (Baldwin, 2004; Wade & Halligan, 2004). The bio-medical model of illness, which has dominated western healthcare for the past century, is underwritten by three assumptions; 1) all illness has a single underlying cause, 2) disease is always the cause, and 3), removal or attenuation of the disease will result in a return to health (Wade & Halligan, 2004). However, the intangible and difficult to detect nature of many MSD does not fit within the bio-medical model solution to containing disease (Stewart, Polak, Young, & Schultz, 2012). There is now sufficient evidence to suggest that these assumptions are incorrect (Wade & Halligan, 2004). The inadequacy of the bio-medical model lies in the failure of anatomic and physiologic information to provide a dependable physical basis for prognosis (W. S. Shaw et al., 2009). Arguments spanning decades have led to a consensus that problems as multi-faceted as WD in the context of RTW require analytic focus at different levels, including the individual, the workplace and healthcare systems (MacEachen, Kosny, Ferrier, & Chambers, 2010). As a result, traditional bio-medical views of pain and disability have now been superseded, at least in the field of WD (Sullivan et al., 2005).

2.1.5. In with the new: bio-psychosocial healthcare

The bio-psychosocial model of health argues that factors both biological and psychosocial in nature contribute to the development of long-term WD (Besen et al., 2015). Research has shown a clear link between psychosocial factors and the development of chronic pain and disability, in that psychosocial risk factors play an important role in the transition from acute pain to long-term disability (Westman et al.,

2008). Furthermore, research in work-disabled populations has evaluated the effects of various factors on the progression towards long-term WD and results show a trend for psychosocial and workplace variables to be overall better prognostic indicators than only bio-medical and anatomic factors (W. S. Shaw et al., 2009).

The rise of bio-psychosocial approaches has laid foundations for frameworks that have been able to chart previously unrecognised or ignored relationships in the field of WD. An example is the International Classification of Health, Disability and Functioning (ICF) model, which was derived from the World Health Organisation's conceptualisation of health, illness and disability (Sandqvist & Henriksson, 2004). Through conceptualising the ability to work as an "activity" within the ICF framework, the ability to work is therefore seen as the interaction between physical (body structures and functions) social (participation) and contextual (personal and environmental) factors (Hawkins, McGuire, Britt, & Linder, 2015). As a result, WD is now conceptualised as a function of such physical, social and contextual influences, rather than being medically determined (Franche et al., 2005).

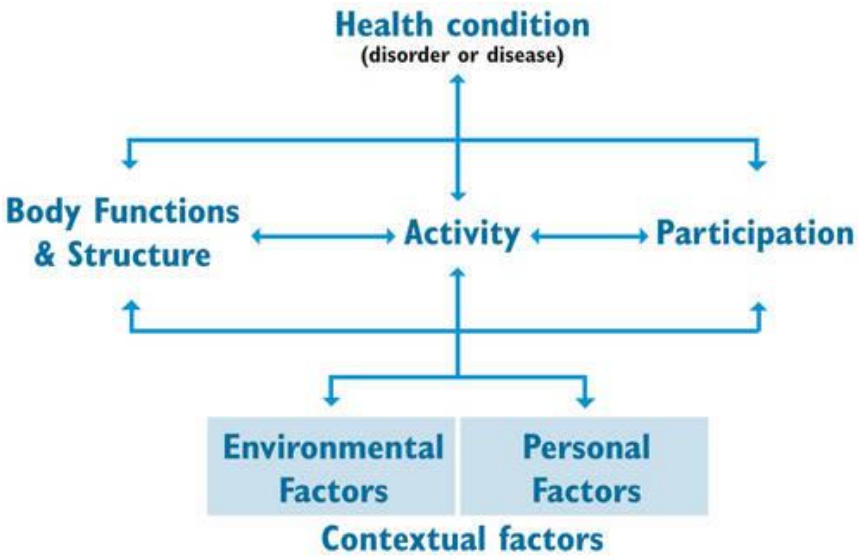


Figure 1. ICF Framework. Adapted from "towards a common language for functioning, disability and health: ICF" by World Health Organisation, (2002). *World Health Organisation*, p. 9.

2.1.6. The workplace

With a transition towards a healthcare approach that now casts its gaze over a wider area in the field of WD, the workplace itself has begun to draw increasing attention. Naturally, workers are subjected to all sorts of working environments, organisational factors and even public policies that are likely to have an influence on their ability to perform daily work (Williams, 2014). In addition to individual workplace characteristics such as work tempo and heavy lifting, which have been described as being important when considering the determinants of losses associated with work-related MSD (Baldwin, 2004), societal, legislative and macro-economic factors have also been identified as being influential forces in the workplace (Murgatroyd et al., 2016). Feuerstein (1991) reported that factors such an accelerating global economy, an aging workforce, and ever-increasing cognitive and interpersonal complexities within workplace environments would lead to increased RTW challenges in the context of WD in the following decades. Some of these predictions may in part be validated by Cullen et al. (2018), who has reported that older workers do take longer to RTW than younger workers, and employment relationships are becoming more precarious due to the complexity of job arrangements in modern times. However, despite the theoretical move toward greater acknowledgement of social and cultural influences, much of the research still tends to situate the “problem” in the mind of the worker, in addressing individual factors without sufficient consideration of contextual problems inherent in the working environment (Stewart et al., 2012). With this in mind, there is still much scope to better understand environmental factors within and relating to the workplace in the context of MSD (Dunstan & Maceachen, 2013).

2.1.7. Vocational rehabilitation

If bio-psychosocially focussed research has led to greater awareness of other factors and findings that influence WD, then VR is the service through which such findings may

be put into practice. VR is multi-disciplinary by nature, and encompasses all practices directed at enabling people who are experiencing WD to obtain or maintain work (Fadyl, McPherson, Schlüter, & Turner-Stokes, 2015). RTW is often used to gauge the success of VR efforts, and is a key performance indicator for VR providers participating in workers compensation systems (Langley, Lilley, Samaranayaka, & Derrett, 2014). When factoring in the often complex and multifaceted process that is RTW, (being influenced by social, psychological, biological and economic factors), VR providers are compelled to consider numerous stakeholder perspectives in an effort to achieve an overall desirable outcome (Kosny et al., 2013). Like long-term WD, delayed RTW is associated with increased compensation and treatment costs (Steenstra et al., 2015), and although the ongoing development of frameworks such as the ICF model have led to a greater awareness of risk factors in the field of RTW, there is still a scarcity of research into many of these domains (Fadyl, McPherson, Schlüter, et al., 2015). It may be the case that we are currently experiencing a hangover from the bio-medical era, in that many factors that may be pivotal in influencing RTW and in turn WD outcomes remain poorly understood or completely hidden from our view (Kapoor et al., 2006; W. S. Shaw et al., 2013). As a result, frontline VR providers in many cases may have little choice but to continue co-ordinating RTW efforts using methods and notions that research at least has long since abandoned, unsurprisingly with mixed success on all levels.

It is encouraging however, that some research has in fact been successful at breaking through into clinical practice and in turn, influencing how the VR industry operates. For example, in response to the revelation that individuals who fail to return to their pre-injury roles within three months' post-injury have a much higher likelihood of experiencing ongoing WD (Sullivan et al., 2005), several industrialised countries now encourage RTW before full health recovery as an approach to disability management (Tjulin, Maceachen, & Ekberg, 2011). This disability prevention strategy lies in stark contrast to what the bio-medical approach of decades gone by would have supported. Under bio-medical thinking, the prospect of returning an individual to work with residual pain and functional limitation was regarded as being highly unlikely to influence, or even detrimental to recovery efforts (W. S. Shaw, Findley, & Feuerstein, 2011). However, although

promoting early RTW may be a simple disability prevention measure, developing greater accuracy in identifying the predictors of RTW after injury remains an unmet yet essential pre-requisite for developing better, comprehensive interventions to reduce the overall burden of WD (Murgatroyd et al., 2016).

2.1.8. Return-to-work expectations

In workers affected by MSD, RTW-Ex are the most consistent and powerful predictor of RTW currently known (Dunstan et al., 2013). Recent studies have suggested that RTW-Ex warrant greater attention as risk factors for problematic outcomes and as targets of intervention (Carriere, Thibault, Milioto, & Sullivan, 2015). As a result, there has been a considerable amount of research focused on the relationship between RTW-Ex and recovery in patients with MSD (Carroll et al., 2016). However, across literature sources, there is great inconsistency with regards to how RTW-Ex are defined and measured (Young et al., 2015). Furthermore, in spite of their apparent predictive power in the context of WD, RTW-Ex remain essentially unknown, if not at least overlooked in the professional circles I am exposed to in my own experience of VR practice.

Countless clinical observations regarding how people with similar physical injuries would take drastically different recovery pathways sparked my interest whilst I was in the midst of my post-graduate study. This led to my own transition away from a predominantly bio-medically informed view of physiotherapy practice, to a relatively more bio-psychosocially aware position. Within the ICF model, contextual factors are broken down into personal and environmental factors, and for some time RTW-Ex grew as a dominant “personal” factor I often considered within my clinical practice. Prior to and during the process of undertaking this research, the varying definitions of RTW-Ex, the effects of RTW-Ex on RTW outcomes, the factors that may influence the formation of RTW-Ex and the potential utility of being able to change someone’s RTW-Ex in clinical practice have remained at the forefront of my mind.

2.1.9. Workplace supports

Whether through a sub-conscious desire for symmetry in relation to the "personal-environmental" balance depicted within the ICF model's contextual domain, or more logically, again through my interest met with a frustratingly sparse amount of available research, I chose WS as a second, "environmentally" situated predictor of RTW to investigate within my own research.

Lack of support from colleagues and supervisors has been identified as a risk factor for developing poor RTW outcomes (van Vuuren, Zinzen, van Heerden, Becker, & Meeusen, 2007). Similarly, factors such as unsupportive workplace culture and job dissatisfaction have also been pinpointed as being associated with longer work absences in the context of MSD (Williams, 2014). Despite acknowledging that WS are likely to be instrumental in VR processes and outcomes for injured workers (van Vuuren et al., 2007), there is a paucity of research available that investigates this in much depth (Jetha et al., 2018). Potential explanations for this reported paucity could include issues such as there being great heterogeneity in definitions associated with the term "workplace supports", a complexity of levels and stages where WS could be offered or withheld implicitly or expicitly, and of course, the multitude of job types and working conditions in existence. Such issues may make it difficult to present clear and organised arguments surrounding the potential influence of WS. In once again reflecting upon my own experiences of practice, a common standpoint from employers during RTW negotiations was "we'll have them [the worker] back in the workplace when they're 100%", or "there are no light duties". I would often contemplate such views in relation to the reasons for employers taking such a stance, and the potential effects such views could have on the worker's eventual RTW outcome. In again referencing a newly adopted "bio-psychosocially aware" position, such experiences led to broader questions about the relationships and organisational dynamics inherent within workplaces, and I steadily cultivated a developing interest in WS. Within the studies included in this thesis, the various terms and actions that are associated with WS are categorised and organised. The purpose of

this is to make better sense of the dynamics and complexities inherent within the workplace environment. This in turn, may provide opportunities to gain original insights into WS in the context of WD.

2.1.10. New Zealand's health context

In taking a wider view of the landscape surrounding study two, it is important to consider the social and political environment that it is situated within. In New Zealand, the largest funder of VR services is ACC, a national organisation set up by governmental legislation that provides no-fault cover for personal injury (Accident Compensation Corporation, 2019). ACC is financially supported by the New Zealand government, and other avenues such as New Zealand employers and road users through ACC levies (Accident Compensation Corporation, 2018). If a person is injured owing to an accident and is employed in New Zealand, in addition to treatment costs, ACC will provide wage compensation to that worker for the time that they are off work, and also will fund VR services to support that person's RTW where applicable. In 2016 alone, an estimated 233,000 claims were made to ACC for work-related injuries (Stats NZ, 2017).

The New Zealand population in 2018 was estimated to be 4,926,400 with an employment rate of 68.2% and an unemployment rate at 4.3% (Stats NZ, 2019a, 2019b). Comprehensive, quality health services for all people, living in all areas of New Zealand are considered a priority for the government in an effort to address inequalities (M. Hudson, Milne, Reynolds, Russell, & Smith, 2009). However, the one quarter of New Zealanders that live in rural areas or small towns are subject to limited access to health services (Ministry of Health, 2019b). Furthermore, New Zealand's indigenous Māori population are estimated to account for 14.6% of the total population (Stats NZ, 2018). Māori are over-represented with regard to poor health outcomes, and are therefore a priority within government healthcare initiatives to improve rehabilitation services for Māori and ultimately their health and wellbeing (Harwood, 2010).

Study two is based in the Northland region, or “Te Tai Tokerau”, which has an estimated 179,370 on the roll of its district health board (Ministry of Health, 2019a). While across the country, 25% of New Zealanders live in rural areas, 66% of Northlanders were considered to live in rural areas in 2006 (Northland Regional Council, 2007). Furthermore, in comparison to New Zealand’s national Māori population (14.6%), nearly one third (31.7%) of Northlanders identify as Māori (Northland District Health Board, 2016). When drawing upon these statistics, it appears that the Northland region may be particularly vulnerable when it comes to receiving comprehensive, quality health services. A clinical example of such an issue is that VR service providers are only located within the main urban areas, meaning additional time and travel costs may be incurred in the case of any injured worker who does not live within a main urban area, therefore potentially stretching resources allocated to that worker. As such, the population based in the Northland region is particularly important when seeking insights that may be important to New Zealand’s health priorities.

2.1.11. Summary

This topic background highlights several key points to consider when reading the studies that follow in chapters three and four. In summary, WD is met with enormous yet likely underestimated costs (Briggs et al., 2018), and it is noted that although only a small percentage of injured workers become long-term work-disabled, it is this group that incurs the vast majority of costs attributed to WD (Westman et al., 2008). Furthermore, although any MSD can be associated with long-term WD, LBP is identified as the most prevalent and costly (Turner et al., 2006).

Existing research has identified associations between being employed in work, and maintaining physical and psychological health and well-being (Fadyl, McPherson, & Nicholls, 2015) and in recent years traditional bio-medical views of healthcare have made way for a more bio-psychosocially focussed approach in the field of WD (Besen et al., 2015). This approach is credited for influencing the development of frameworks such

as the ICF model, informing frontline services such as VR, and commissioning the undertaking of research into lesser known areas of WD such as the workplace itself (Dunstan & Maceachen, 2013; Fadyl, McPherson, Schlüter, et al., 2015; Franche et al., 2005).

RTW-Ex and WS are selected for this study based on a scarcity of, and inconsistencies within, available research on these topics (Jetha et al., 2018; Young et al., 2015). Furthermore, researcher interest and personal experience have also contributed towards the selection of RTW-Ex and WS within this thesis. The political and legislative context of New Zealand's healthcare system gives an overview of ACC processes along with some of the demographic characteristics of the people that make up Northland, the region where study two is based. Northland may be particularly vulnerable to receiving inequitable distribution of health service resources owing to its demographic makeup (Ministry of Health, 2019a).

Overall, the acceptance that psychosocial factors are significant determinants of pain and disability, in that they have prognostic value in the context of RTW, has shaped the way we now view WD (W. S. Shaw et al., 2013; Sullivan et al., 2005). However, despite the successes of the bio-psychosocial approach in recent times, in allowing us to begin to see "the bigger picture" in RTW research (Besen et al., 2015), there may yet be much more work to do before a measurable reduction in the burden of WD is observed.

The points raised within this summary highlight several gaps either owing to a lack of current literature, or a lack of current resources. This section assisted in justifying the aims of the studies in showcasing that there is great congruity between the chosen research questions, the studies' designs and the considerations outlined within the topic background.

2.2. Part II- Philosophical Underpinnings.

This section outlines the philosophy and methodological approach that underpins study two.

2.2.1. Researcher Assumptions

As humans, we all think and behave within our own reality or worldview, comprised of a set of assumptions which assist us in making sense of everyday life (Ryan, 2006). Whether aware of it or not, researchers invariably bring numerous beliefs and assumptions from their own realities into their research and therefore must recognise that their own background may shape interpretation, and how they position themselves within the research process (Creswell, 2007). Simply put, the researcher brings a set of beliefs that guides action (Guba & Lincoln, 1994). Being aware of our assumptions can assist in shaping research questions, can inform how we seek and analyse information, and can help others better understand our research (Creswell, 2007).

2.2.2. Researcher interview

Prior to the undertaking of study two, I underwent a recorded interview with my primary supervisor (JF) in order to document 'who' I was coming into the research project, my thoughts on what the interviewing process may produce and my pre-existing beliefs or assumptions leading up to the interviews. These assumptions related to participants, employers and the wider context that study two is situated within. Below I give a brief summary of the content of this interview illustrated by quotations from my responses to the questions asked.

Who am I?

- Coming into this research I identified as a therapist and as a student. My primary focus was to work towards improving how certain processes are understood and then delivered within New Zealand's VR industry, also considering the likelihood that similar issues are faced in other countries. During my experiences within the VR industry, and in light of having expertise in treating musculoskeletal and chronic pain in the clinical setting, I contemplated the potential effects of several "routine" and well-intended actions within the planning and delivery of rehabilitation services. I concluded that in certain scenarios, some actions could just be a waste of resources, however others I felt, might contribute towards more serious, long-term complications for injured workers. In having gained insights into the traits and characteristics of the long-term disabled, accessed through daily encounters with chronic pain sufferers earlier in my career, I felt that when I stepped into the VR setting, I began to notice similar trends in cases that were becoming problematic. However, I had no way of effectively identifying or communicating these "feelings", instead I had to rely upon anatomical, biomechanical, medical or even ergonomic jargon, the accepted languages of the industry. Rather than having just a "feeling" or an opinion on what needs to change, I wanted to put the necessary work into justifying myself;

Everyone's got their opinions on how it should be.. but I suppose it's the difference between talk and actually putting time and effort, thought, grind into something.

… and I want to produce something that I suppose I've just got a bit more.. not power, but I've got a little bit of a weight behind something that I feel it's not just my opinion.

What will the interviewing process produce?

Through having years of regular contact with chronic pain clients, a mutual trust and openness would often develop enabling me to "see" their realities. This in my view,

precedes any understanding I now may have of chronic pain. When asked about how I would engage with the participants in study two, I believed a similar strategy would lead to gaining the desired insights into RTW-Ex and WS;

I suppose I want to get a real perspective from them.. I hope that they can confide, yeah.

It was discussed that the overall interpretive philosophy of stepping into someone else's reality in order to understand a phenomenon would influence the ways in which the research would be conducted. The influence of this interpretive perspective wasn't only limited to informing choices such as the selection of interviews as the most appropriate method for collecting data, but also the ways in which the methodology would guide me when undertaking the interviews;

… just taking my, who I am on board, I suppose I mentioned a few times that I try and take the hat off.. of a health professional or whatever.. but just try to be a, I suppose.. a fly on the wall in some respects and hopefully allow someone to speak freely.. you know and not give me that prepared answer.

By following the necessary methodological steps throughout the phases involved with the interviewing process, I was ensuring that there would be congruity between the study's philosophical underpinnings in the planning stages, right through to the data analysis and reporting phases.

What are my pre-existing beliefs or assumptions about the wider context of this study?

Contextual factors such as living in a rural location and being of Māori cultural background were discussed in relation to study two. Because the study is situated in Northland, it was envisaged that a percentage of participants may be more unfamiliar with some of the various logistical or administrative processes involved with VR. It was discussed that this may provide an interesting, rural angle in comparison to studies conducted in main urban areas;

… it's a rural type set up.. a bit removed from the more faster paced umm.. structured society. Hopefully I'll get a few insights from sort of those, I suppose more meaningful contexts really.. just trying to get a real grass roots New Zealand feel.. I think that's quite important.

In relation to this, it was also discussed that the nature of work in a more rural context may differ from a more technologically influenced, urban working life;

… I suppose, putting things together, potentially you know It might not just be an administrative thing for their job because they might not be an IT worker, they might be lifting heavy loads every day and this [injury] is a really massive thing.. umm and it means a lot for, providing for their family or their whānau.

It was also noted that differing Māori cultural views of healthcare may totally affect the ways in which VR services are perceived;

… it's a lot more holistic and spiritual.. I think being aware of that is probably the key one for me, just thinking about it now, yeah.. just the awareness that their perspective.. their stance might totally be different.

It should be noted that these assumptions should be presented in light of my own cultural background. Being born and raised a New Zealander within a single parent household in a rural town, I believe that I have a natural sense for the value of work in providing for one's family and the challenges that are associated with living in fairly modest circumstances. Furthermore, the tight-knit community I was raised within provided opportunities for me to gain insights into the working dynamics of many other families for example through staying with family friends whenever my mother was on nightshift. In my view, these experiences have undoubtedly had a bearing on my assumptions surrounding the context study two is undertaken within. Finally, the expected relationships between the injured worker and relevant contextual structures such as ACC

were discussed. Firstly, the tendency of many clients throughout my clinical encounters to treat an ACC claim like an insurance policy, in that they intend to be adequately recompensed, was a characteristic mentioned as being worth considering. This belief tends to hold the illusion that being work-disabled owing to injury could be viewed as a paid holiday, as opposed to a potentially career threatening issue. This view was shared as it was thought to be relevant in relation to RTW-Ex and WS. A commonly expressed client viewpoint was re-constructed within the interview;

> *...it's the "I'm injured now and I'm going to make sure I get my money's worth because I've been paying (ACC) levies for flippin' years".*

Another matter, how ACC is viewed within New Zealand society, was discussed. In my experience, rather than ACC mainly being described for its merits, i.e. that it is a no-fault service that provides comprehensive compensation cover after an injury, some clients have been known to express negative views. These opinions often pre-date the service they are currently receiving and often originated from either personal experience during a past injury, or possibly from a wider, societally informed perspective.

> *I think New Zealand's small enough that everyone knows ACC and, and not just knows "oh I've heard of ACC".. they've also got an opinion, you know, so yeah.*

It was also discussed that in my experience, clients often voiced concerns regarding trust, in suspecting that ACC may have an ulterior motive, in trying to get the client back to work before they are ready. It was reasoned that such views could potentially affect the ways in which RTW-Ex and WS unfold during the RTW process. Another re-constructed client expression was;

> *…"what am I going to have to do, what hoops am I going to have to jump through umm in order to receive compensation umm until I'm better".. and I suppose, at the back of the mind,*

it's "these guys want to get me back to work.. umm and are going to ignore the fact that I'm healing, or recovering".

Finally, my assumption that New Zealand's relatively small industrial size in comparison to other nations with larger healthcare systems and more developed insurance policies and where masses of research on WD have been conducted was discussed. This discussion was in relation to why our workers' compensation systems may not be as well developed, and at times are somewhat fragmented. Such processes were suggested to contribute to why employers may find dealing with ACC and providing WS to their workers an awkward or unfamiliar task at times;

… I definitely think that New Zealand, I suppose hasn't quite umm.. found what works best.. I think a lot of those countries are a bit more sort of, well set up.. and they go, this is us, that's it, we've got this down to an art.. and in New Zealand, it's a little bit like "yeah, what's happening here?", and "do I get money yet, for my injury?, what's the ruling?, do I have to wait a week?, what's the deal here?".. There's a lot of sort of unknowns, and it's the same thing with employers and support, you know "am I supposed to call this guy or?, when's he back?, what's gonna happen here?", he or she, "are they going to umm.. are they going to be fit to work?".. "if I bring them back on site, am I going to get sued, for injuring this person?", "is it safe?".. it.. "what's the go here?". You know, all of those things, I still think there's.. they haven't quite you know found.. found their feet I suppose.

Overall, these passages serve to outline some of my views and assumptions on the topic. In sharing who I was coming into the research, how I planned to approach the interviews, and how I viewed the wider context surrounding the participants, the influence of my assumptions at the time on study two can be considered. These assumptions not only offer a comparison point for later evaluation but are offered to enable a better overall

understanding of the researcher and the research (Creswell, 2007). I revisit and reflect on these assumptions in relation to the findings of study two in chapter five.

2.2.3. Social constructivism

The aim addressed within study two lent itself to qualitative inquiry. With this in mind, and taking into account my own assumptions about reality and understanding, I chose the interpretive framework social constructivism as the most suitable framework for guiding this qualitative phase. Social constructivism holds the view that the world consists of multiple, constructed realities (Domholdt, 2005), and posits that our knowledge of reality is a social construction (Walsham, 2006).The aim of study two was to learn more about how the effects relating to RTW-Ex and WS may be better addressed from the experiences of the participants themselves. The social constructivist stance avoids rigid frameworks such as in positivist research, and adopts more personal and flexible structures that are receptive to capturing deeper meaning through human interaction (L. A. Hudson & Ozanne, 1988). Social constructivism was then identified as a suitable framework for facilitating the approach of one-on-one participant interviews (Creswell, 2007) and would provide me with the opportunity to explore participants' constructed realities in relation to their current RTW experiences.

2.2.4. Philosophical assumptions in qualitative research

The four philosophical assumptions of ontology, epistemology, axiology, and methodology are considered to be the key premises that are integrated with the interpretive frameworks used in qualitative research (Creswell, 2007). These are summarised on the following page.

PHILOSOPHICAL ASSUMPTIONS

Ontological → Epistemological →Axiological → Methodological *(→Research Method)*

← *Interpretive framework (social constructivism)* →

Figure 2. Philosophical Assumptions. Adapted from "Qualitative inquiry and research design" by Creswell (2007), *Sage Publications*, p. 17.

Crotty (1998) advocates for the use of the term "scaffolding" to describe how these philosophical assumptions can be used as versatile supports, from which robust research methodologies can be built. These edicts require the researcher to first view the research through several levels of philosophical abstraction in then being able to appropriately influence the construction of the relatively more concrete research methods.

Ontology is concerned with the nature of reality, or "being" and embraces the notion of multiple realities (Crotty, 1998). Through a social constructivist lens the ontological assumption encourages researchers to conduct studies with the intent of reporting lived experiences and interactions through supplying evidence in the form of themes and presenting different perspectives (Creswell, 2007). Such ontological recommendations guide the direction of the research and assist in the selection of appropriate methods within research design.

The epistemological assumption deals with what it means to "know", and how we know what we know, (Crotty, 1998). Social constructivism posits that there is no direct, unmediated access to reality (L. A. Hudson & Ozanne, 1988), therefore researchers must try to get as close as possible to the participants being studied (Creswell, 2007). Social constructivists also believe that researcher and participant are interdependent and mutually interactive, and therefore co-construct their realities. The goal of this type of research then, is to make sense of what is perceived as reality (L. A. Hudson & Ozanne,

1988). The acceptance that the researcher is a part of the data collection process itself also assists in selecting the tools that will be used to carry out the research design stage.

As a way of theoretically positioning one's self, the axiological viewpoint supports the concept that inquirers admit the value-laden nature of their study and actively report their values and biases (Creswell, 2007). Social constructivist inquiry is value-bound, in contrast to being value-free, which is the assumption in positivist research (Domholdt, 2005). In encouraging the acceptance and reporting of values and assumptions within the research process, this philosophical assumption guides the way by which the research is shaped and findings are interpreted.

Methodology is characterised as an inductive, emergent process, shaped by the researcher's experience in analysing the data (Creswell, 2007). Methodology denotes how philosophical assumptions inform, or can be "applied" to the methods (Yanow & Schwartz-Shea, 2009). Crotty (1998) describes methodology as a strategy which provides a link between methods and outcomes. Regardless of orientation, methodological processes need to be rigorous in the sense of being thorough and meticulous (Yanow & Schwartz-Shea, 2009).

2.2.5. Thematic analysis as method

Based on the guidance provided within the four philosophical assumptions denoted above, TA, more specifically, reflexive "Big Q" TA is an ideal method for guiding the planning, data collection and data analysis processes undertaken within study two (Terry, Hayfield, Clarke, & Braun, in press). From an ontological perspective it supplies evidence in the form of themes, and has an ability to search for common threads or themes that extend across sets of interviews (Vaismoradi, Turunen, & Bondas, 2013). In relation to the epistemological assumption it supports getting close to participants and encourages the interdependent co-construction of reality. Throughout the various processes involved with TA it embraces the value-laden reality of researchers in satisfying the axiological assumption. Finally, the inductive, emergent process of "six-

phase TA" (Braun, Clarke, Hayfield, & Terry, 2018), almost exactly typifies how methodological considerations are to be handled from the perspective of being applicable to methods and being thorough and meticulous as instructed within the methodological assumption.

Importantly, TA is theoretically independent, therefore its flexibility makes it suitable for use within many interpretive frameworks, so long as theoretical positioning is made explicitly clear (Braun & Clarke, 2006). Overall, TA offers a straight-forward process for analysing data that is theoretically independent, emphasises attention to detail and results in the creation of rich and detailed themes, making it an excellent choice for novice researchers (Braun & Clarke, 2006). The processes involved regarding the implementation of TA in relation to study two will be further described within the methods section of chapter four.

In summary, the interpretive framework social constructivism provides a logical and suitable foundation from which the aim of study two can be addressed. The structure of the design is further supported by the "scaffolding" supplied by the philosophical assumptions described and how they are integrated within the interpretive framework. Finally, in acknowledging the type of interpretive framework from abstract (ontological), towards more concrete (methodological), the method of TA has been justifiably selected as a suitable tool from which new theories may be constructed.

The final section of chapter two details the undertaking of a pilot literature review that allowed the researcher to gauge the availability of research on the topics of RTW-Ex and WS. Importantly, this section provides insights that are used to inform the development of a robust framework for study one, which is described in chapter three.

2.3. Part III- Pilot Literature Review.

2.3.1.Purpose

After conducting several informal literature searches, a pilot literature review was undertaken. I saw this as a necessary step in order to gain an entry point into the literature regarding RTW-Ex and WS within the greater field of WD research. Studies were gathered that investigated either RTW-Ex or WS in relation to RTW.

Two searches; one RTW-Ex focussed and the other WS focussed, conducted using the MEDLINE database resulted in the retrieval of dozens of studies. Several quantitative studies, which claimed to investigate RTW-Ex in relation to RTW were identified. These all used observational prospective designs. However, only two studies, both qualitative, had been retrieved in relation to WS. When reviewing the studies that had been retrieved, a number of issues were identified.

Firstly, many studies that did not specifically target acute MSD. It also became apparent that a distinctly different term, “recovery expectations” appeared frequently in the results. In some studies, RTW-Ex from a perspective other than the injured worker, for example the treating doctor were investigated. There was also an overall lack of relevant WS studies retrieved in the pilot literature review at which stage it was unclear whether there was a lack of WS research or the search strategy was inaccurate. The next section discusses how these issues assisted in shaping the design of study one, presented in chapter three.

2.3.2. Implications of the pilot literature review for Study One

The pilot literature review was worthwhile in that it offered insights into the available literature on the topic area, and raised challenging questions which gave way to a more focussed and appropriate systematic review design for study one. For example, it was

confirmed that RTW-Ex remained a standalone concept for focus, as recovery expectations were considered to be a concept too distinct from RTW-Ex. It was envisaged that also incorporating recovery expectations would further complicate both studies as it would be difficult to keep the focus of the thesis directed towards RTW related outcomes as opposed to general recovery outcomes. It became apparent that future searches would have to specify that musculoskeletal injuries or MSD were the type of injury I was seeking within the study populations, and that it would be important to focus in on acute MSD. Within this process it was also confirmed that RTW-Ex and WS studies may be suited to contrasting methodologies. While quantitative research investigating RTW-Ex was retrieved within the pilot literature review, it was reasoned that WS may be more compatible with qualitative methodologies. This was due to WS being considered a concept that may suit interpretation as well as measurement. In addition to this, the review led to the development of frameworks which clearly delineated (for the purposes of this research) what should, and what should not be considered WS. These details are elaborated upon in chapter three.

3. STUDY ONE- SYSTEMATIC LITERATURE REVIEW.

3.1. Purpose of review.

This chapter articulates the processes involved with the planning, development, and execution of study one. The structure of this systematic literature review is informed by the findings within the pilot literature review described in chapter two- part III. This review was designed to comprehensively address the following research question:

-What effects do RTW-Ex and WS have on RTW for workers with acute musculoskeletal injuries?

3.2. Definitions of terms.

To ensure there is no ambiguity with research terms throughout study one, several terms need to be clarified. Within this review, RTW-Ex are defined as worker-held beliefs about their own expectations of RTW. Recovery expectations are not considered to be within the scope of this study unless they specifically pertain to the recovery of work-related function.

In order to sufficiently investigate WS from a number of perspectives, they are divided into three sub-levels using a purpose-built hierarchical framework. The framework, outlined in Figure 3, divides WS into three sub-levels and is designed to organise WS in relation to the findings of study one (Oksanen, Kouvonen, Vahtera, Virtanen, & Kivimäki, 2010). Horizontal WS are those supports delivered on the same hierarchical level as the injured worker i.e. from a co-worker (Oksanen et al., 2010). An example of WS coming from a horizontal level is early and ongoing contact from the co-worker (Dunstan & MacEachen, 2016). Vertical WS are supports that are delivered across institutionalised power or authority gradients i.e. from a supervisor or manager (Oksanen et al., 2010). An example of WS at the vertical level is a workplace accommodation offer (Wrapson & Mewse, 2011). Organisational WS are supports offered from an organisational or

company level. This level of WS refers to factors such as workplace culture and health and safety practices within a workplace (Amick et al., 2017). An example of organisational WS are a company's WD management policies and procedures (Jetha et al., 2018).

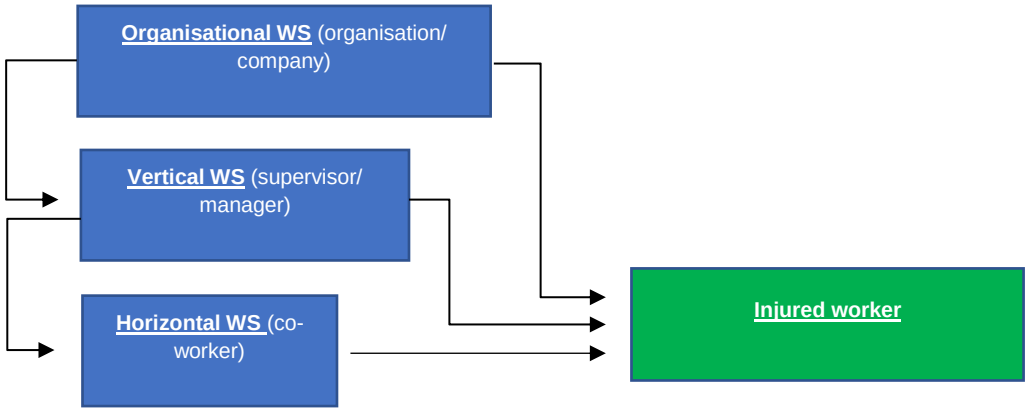


Figure 3. Hierarchical Framework for Workplace Supports. Adapted from "Prospective study of workplace social capital and depression: are vertical and horizontal components equally important?" by Oksanen et al. (2010). *British Medical Journal Publishing Group*, p. 686.

Physical supports such as assistive devices, and/or ergonomic equipment are not considered WS within study one. Furthermore, support offered from a party external to the workplace i.e. family, medical provider or insurance provider are equally not considered WS.

In acknowledging that the risk of long-term WD rises with increased time off work (Turner, 2006) and that RTW-Ex and WS are being investigated in relation to the prevention of long-term WD, populations who have already been off work for more than three months are not considered suitable for this study. The term "acute" refers to any MSD that is less than three months old as the term "chronic" has been used to refer to cases lasting for more than three months (Sullivan et al., 2005). However, due to the

retrospective nature of both qualitative studies retrieved within the background literature review, and also in light of the identified scarcity of WS literature, it is deemed unreasonable to apply this “acute” criterion to qualitative studies. Finally, musculoskeletal injuries or MSD are the only type of injury included. Within the review, these are deemed as non-complex bone, joint, or soft tissue injuries which would not normally threaten long term independence.

3.3. Search strategy.

The EBSCO health databases search engine was used to complete a multi-database keyword search to gather the available literature on the topic. The search was conducted using the databases MEDLINE and CINAHL. Specific searching tools such as the use of Boolean operators, proximity search functions, truncation and wildcard functions, search related terms, and limiters were performed using the EBSCO health databases site. Once keywords had been created for each domain of the research question (musculoskeletal injury/ MSD, RTW-Ex, WS, and RTW), an initial search performed as described in Table 1. The results of the four domains were then combined in executing two search strategies. The initial RTW-Ex search results (S2) were combined with musculoskeletal injury results (S1) and RTW results (S4) using the Boolean “AND” operator. Next, the WS search results (S3) were also combined with (S1) and (S4) in creating two separate RTW-Ex and WS results lists.

Table 1

Multi-database Keyword Search

Domain	Keywords
Musculo-skeletal injury terms (S1)	*"musc*" OR "joint*" OR "bon*" OR "ligamen*" OR "tendo*" OR "injur*" OR "fractur*" OR "LBP" OR "MSD" OR "low* back pain*" OR (back* N3 pain*) OR "acciden*" OR "strain*" OR "sprain*" OR "tissue*" OR "traum*" OR "?acute*" OR "upper limb" OR "lower limb" OR "spin*" OR "surg*" OR "pelv*" OR "lumb*" OR "thora*" OR "cervi*" OR "foot*" OR "ankle*" OR "knee*" OR "hip*" OR "shoulder*" OR "elbow*" OR "wrist*" OR "hand*" OR "cuff*"*
RTW-Ex terms (S2)	(RTW N3 expect*) OR (return* N3 expect*) OR (RTW N3 conf*) OR (return* N3 conf*) OR (RTW N3 cert*) OR (work* N5 "risk fact*") OR (work* N5 predict*) OR (work* N5 self-efficac*)
WS terms (S3)	"co* worker*" OR ("work* function*") OR (work* N3 absen*) OR (occupation* N3 rehabil*) OR ("work* related" N3 pain*) OR (organi#a* N3 cultur*) OR "organi#at* poli*" OR "work* injur*" OR "supervisor*" OR "employ* support*" OR (workpl* N3 support*) OR (organi#at* N3 support*) OR (work* N3 accommoda*) OR (work* N3 modif*) OR "light dut*" OR (modif* N3 dutie*) OR "work role"
RTW terms (S4)	"RTW" OR "return-to-work" OR "return* to work" OR (job* N3 re-entry) OR (work* N3 re-entry) OR "work* rehab*" OR (work* N3 recovery*) OR (vocati* N3 rehabili*) OR "re-employ*"

Note. (*)- truncation/wildcard operator, (N#)- proximity operator, (#)- replacement operator.

3.4. Inclusion and exclusion criteria.

In addition to several inclusion considerations outlined in 3.2. "definitions of terms", the following inclusion criteria were used.

In response to the findings of the pilot literature review, both quantitative and qualitative designs were included within study one in order to retrieve a sufficient amount of RTW-Ex and WS studies. The date range for the search was set from 01/01/2000 to 01/01/18.

Any potentially relevant articles needed to be available in English. As study one is concerned with RTW, the "working" population were the population of interest in this review. Therefore, the desired age range was set to reflect this need by excluding young

(<18 years) and elderly (>65 years) populations in order to concentrate on this working population.

In further refining the working population, to be included in the review participants needed to be employed in full-time work. Full-time was determined as 30 hours or more per week prior to injury. There were no requirements for the exact body site affected however all participants needed to be suffering from MSD.

Studies that investigated other factors predictive of RTW alongside RTW-Ex or WS were included as long as they presented the findings of either RTW-Ex or WS in isolation from the other factors researched within the study.

With regards to the factors that saw studies excluded from this review, studies with greater than 20% of participants outside of 18-65 years were excluded. Studies where participants were reported to have non-MSD related WD such as cancer, traumatic brain injury, spinal cord injury or congenital neurological/cardiovascular conditions were considered as being outside of the area of focus for this research. However, such studies were only excluded if more than 20% of the cohort had conditions other than MSD.

3.5. Information extracted for analysis.

A wide variety of factors were taken from the studies to be examined. In addition to recording the type of variable investigated (RTW-Ex or WS), the review extracted and compared the aims, the design, and several characteristics of the study population. These characteristics included the acuity of the sample, the country the study was undertaken in, age, gender, percentage of MSD cases within the sample (>80%), and the intensity of workers' jobs. The key findings and critical appraisal scores were recorded for all studies. Specific to quantitative studies, predictor and outcome variables were also recorded.

3.6. Critical appraisal tools.

For quantitative studies, a Risk of Bias Assessment (ROBA) tool originally used by Fortin et al. (2002) was adopted. This tool was considered the most appropriate tool available for assessing observational studies. Observational studies were by far the most common design implemented across the studies retrieved in the pilot literature review. For this reason, the ROBA was selected to critique all quantitative studies.

For qualitative studies the Joanna Briggs Institute (JBI) tool for qualitative literature was used (Joanna Briggs Institute, 2017). Hannes, Lockwood, and Pearson (2010) considered the tool to be the most coherent qualitative assessment tool available due to its focus on assessing the congruity of a study in comparison to two other prominent tools; the critical appraisal skills program “CASP” tool and the evaluation tool for qualitative studies or “ETQS”.

3.7. Study One results.

The results of the systematic literature review search strategies are presented in the preferred reporting items for systematic reviews and meta-analyses (PRISMA) diagram in Figure 4.

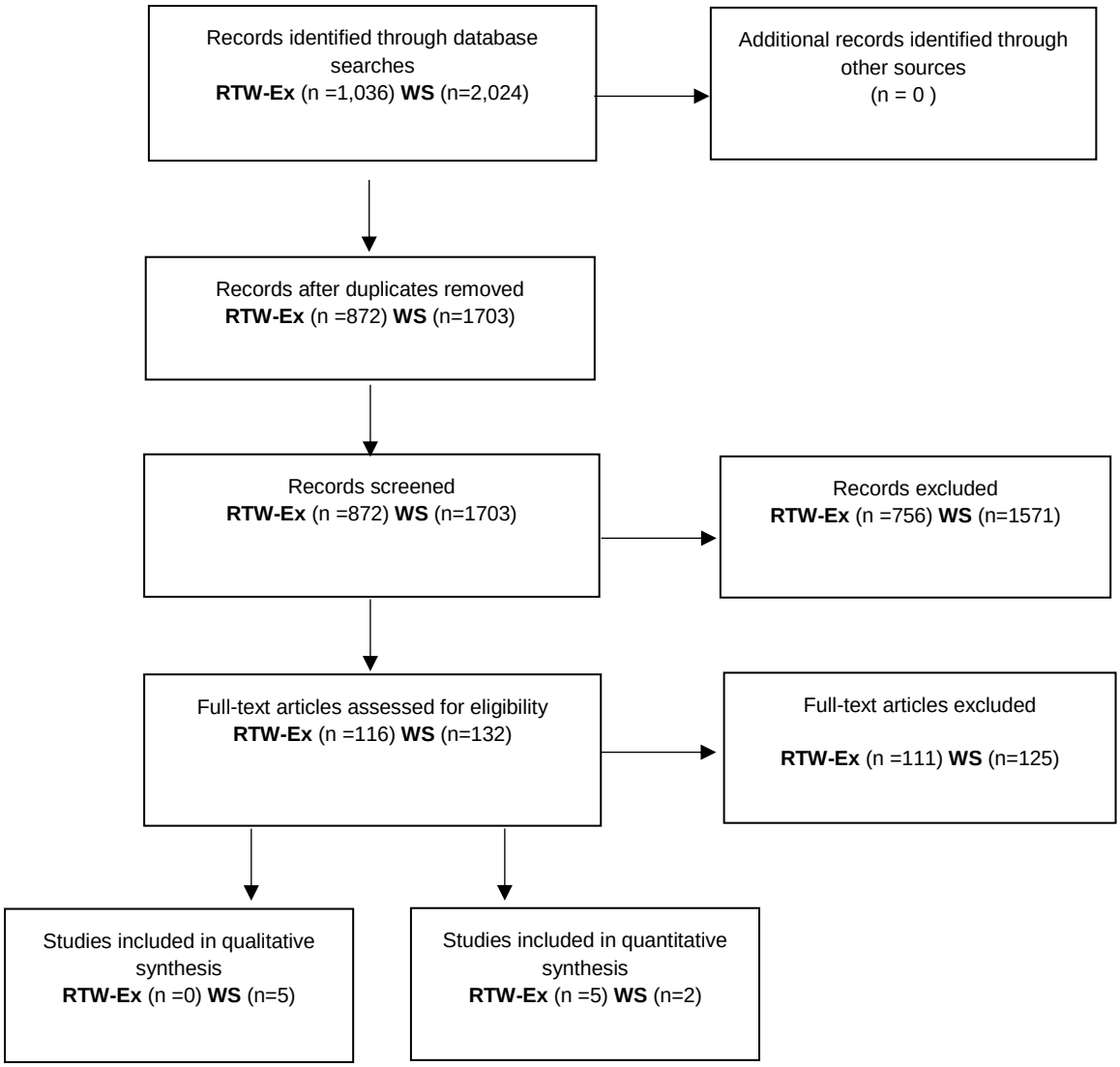


Figure 4. PRISMA eligibility flow diagram. Adapted from "the PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration" by Liberati et al. (2009). *British Medical Journal.*

The search yielded seven WS studies that looked into at least one of the three identified WS levels, along with five studies investigating RTW-Ex. All of the RTW-Ex studies were quantitative. Additionally, two of the WS studies were quantitative. Five qualitative studies relating to WS were included into the review.

3.7.1. Studies that evaluated return-to-work expectations

Table 2 shows the information extracted from each study and includes critical appraisal of the studies examining RTW-Ex.

Study aims and designs

All five studies used an observational prospective design. Across the studies, RTW-Ex were assessed in the participants at a given time point following injury. Participants were then followed up in order to determine associations between RTW-Ex and RTW.

Study participants

The sample sizes across the studies ranged from as few as 241 (Besen et al., 2015) to as many as 1068 (Turner et al., 2006). All studies collected baseline data from participants within two weeks of initial injury with the exception of one study where participants' RTW-Ex were measured up to six weeks (median 18 days) post-injury (Turner et al., 2006).

All but one study involved participants with LBP. Murgatroyd et al. (2016) involved participants with upper and lower limb fractures secondary to motor vehicle accident.

Across the studies, participants were recruited through hospitals, health clinics and compensation databases. Four studies were conducted in the United States, with the remaining study being conducted in Australia (Murgatroyd et al., 2016).

The studies varied in the methods they used to report age. One study reported the median age of the cohort, which was 35 (Kapoor et al., 2006). The remaining studies reported the mean age, which across the studies was 37, or provided the age range of the participants. Overall, the age range was between 18 and 71.

In two studies, there were between 40-46% female participants (Besen et al., 2015; Reme et al., 2012). In the remaining studies, 20-30% of participants were female. Overall, 33% of participants were female.

Only two studies disclosed the work intensity of their participants (Besen et al., 2015; Reme et al., 2012). The proportion of participants with “blue collar” physical roles in these studies was 72% and 76%.

Predictor and outcome variables

With the exception of Turner et al. (2006), all studies assessed RTW-Ex within 14 days of injury. In terms of predictor variables, there was great variety in how RTW-Ex were assessed across the studies. Two studies measured RTW-Ex through asking the participant to estimate the total number of days until RTW or “usual work activities” (Besen et al., 2015; Murgatroyd et al., 2016). Reme et al. (2012) adopted a similar approach but instead asked the participants to disclose their expected duration of job limitations using a Likert scale, i.e., 1= 0-2 days, 5= >60 days.

The remaining studies recorded the participants’ reported likelihood of RTW within a given timeframe using Likert scales. Kapoor et al. (2006) measured RTW-Ex against a four week timeframe, whereas (Turner et al., 2006) assessed RTW-Ex as the participants’ certainty that they would RTW within six months. Furthermore, the descriptive information used to anchor the Likert scales differed between these two studies.

With regards to outcome variables, all studies included a “RTW status” follow up measure, at one or more time points. Murgatroyd et al. (2016) recorded RTW status at six months, one year, and two years after baseline assessment. Kapoor et al. (2006) also measured RTW status at more than one time point; at four weeks and three months. The remaining studies used one time point to record RTW status, ranging between three and six months. In addition to RTW status, these studies also included supporting outcomes such as cumulative duration of disability, for example the total number of days of absence within the stated time period (Besen, et al., 2015; Reme, et al., 2012; Turner et al., 2006). Furthermore, Reme et al. (2012) and Besen et al. (2015) also recorded other RTW related factors at follow up such as number of days with limitations, temporary modifications implemented and current restrictions.

Critical appraisal scores

Because all of the RTW-Ex studies were quantitative, the ROBA was used to determine quality. The final scores ranged between 12-17 of a maximum 18 points. Across the six domains within the ROBA, “study attrition” was poorly described. When combining the five studies’ scores for this domain, only six of a possible 20 points were awarded. Murgatroyd et al. (2016) was the only study to address this section well, with three out of a possible four points for this domain. The use of a secondary dataset in one study (Besen et al., 2015), and a failure to provide data on those lost to follow up in the remaining three studies were the main reasons why this domain was poorly adhered to. With the exception of Kapoor et al. (2006), which scored poorly in the “analysis” domain, no other study dropped more than one point in any of the remaining four domains. Four studies were deemed to have a moderate risk of bias with scores between 12-14. Murgatroyd et al. (2016) achieved the highest score with 17/18, and was considered to have low risk of bias. For further detail on the critical appraisal scores, please refer to Appendix C “critical appraisal scoresheets”.

3.7.2.Study findings (return-to-work expectations)

All studies found RTW-Ex to be predictive of RTW. Reme et al. (2012) and Turner et al. (2006) demonstrated findings that supported an association between low RTW-Ex and poorer RTW outcomes for participants. After controlling for baseline socio-demographic, pain, and disability factors, Turner et al. (2006) reported that participants with very low RTW-Ex were three times more likely to be work-disabled at six months when compared to those with high RTW-Ex. Reme et al. (2012) also reported an association between low RTW-Ex and RTW status at three month follow up but notably used other variables along with RTW-Ex in identifying an “emotionally distressed” cluster of participants. This group were found to be six times more likely to have not achieved RTW at three months.

The remaining studies demonstrated associations between high RTW-Ex and positive RTW outcomes. Murgatroyd et al. (2016) found that those reporting RTW-Ex of under 90

days experienced a faster RTW than those who did not. Besen et al. (2015) reported a direct relationship between favourable RTW-Ex and fewer days of absence within three months and Kapoor et al. (2006) identified that participants with positive RTW-Ex were more likely to have achieved RTW at both follow up intervals.

Table 2

Return-to-Work Expectations Studies Results

Author(s)	**Aim, RTW variable & design**	***Study participants***				***Outcome measures***		**Critical appraisal score & Key findings**
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Predictor variables**	**Outcome variables**	
Kapoor et al. (2006).	To assess patient expectations of RTW RTW-Ex Observational prospective	300 acute LBP <14 days	Recruited across 8 health clinics USA	Median= 35 M:210, F= 90 30%	100% n/d	RTW-Ex: -Likelihood of RTW within 4 weeks within Back disability risk questionnaire (BDRQ) using 5-point Likert scale.	RTW status at four weeks and three months	12/18 At both follow up intervals, participants with positive RTW-Ex were more likely to have resumed full duty work. X-squared tests tested associations between patient RTW-Ex and actual RTW <u>Four weeks:</u> +ve RTW-Ex (66.5% vs. 40%, X-squared= 17.22, P <0.001) <u>3months:</u> +ve RTW-Ex (82.2% vs. 60%, X-squared= 17.22, P <0.001) Results explained 6.3%, and 6% of variance at the two time points, medium to large effect size

Note. & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

Author(s)	Aim, RTW variable & design	*Study participants*				*Outcome measures*		Critical appraisal score & Key findings
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Predictor variables**	**Outcome variables**	
Turner et al. (2006).	To examine whether psychosocial variables assessed predict 6-month WD RTW-Ex Observational prospective	1068 Sub-acute LBP <6 weeks (median 18 days)	Reviews of database following submission of workers compensation claims USA	18-71 (mean = 39) M: 740 F: 328 30%	100% n/d	RTW-Ex: certainty that would be working in 6 months (0= not at all, 10=extremely certain) PCS Mental health (MH) scale of the SF-36v2	RTW status at 6 months Total WD at 6 months/ 180 days after claim submission Total disability duration (no. of days wage of replacement)	13/18 At 6 months, 196 (18.4%) remained on compensation RTW-Ex, mental health and PCS each showed statistically significant ($p<0.05$) associations with WD Total disability duration was over 12 times higher in low RTW-Ex participants, than high RTW-Ex participants Adjusted OR for i) very low and ii) low RTW-Ex with 6 month WD: i) OR = 3.08 ;95% CI 1.46—6.48) ii) (OR=2.05 ;95% CI 0.98—4.26)

Note. & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

Author(s)	Aim, RTW variable & design	Study participants				Outcome measures		Critical appraisal score & Key findings
		Sample size, type of injury & acuity	Method of recruitment & country	Age, gender & % female	% of MSD & work intensity	Predictor variables	Outcome variables	
Reme et al. (2012).	To detect patients for early Rx based on self-reported expectations RTW-Ex Observational prospective	496 acute LBP <14 days	Recruited upon arrival to occ. health clinics USA	18-65 (mean 37) M:288, F: 208 42%	100% 72% Blue collar work	RTW-Ex: -3 questions relating to likely duration of symptoms and job limitations using Likert scale 1= 0-2 days, 5= >60 days Quebec back pain disability Scale (QBPS) PCS TSK	RTW status at 3 month follow up: Current work status, temporary modifications or physician restrictions Cumulative duration of work absences QBPS, PCS, TSK	13/18 An emotionally distressed cluster (19%) of participants was identified using several predictor variables (including RTW-Ex). This group were nearly 6 times more likely to have not returned to work after 3 months; OR=5.88; 95% CI 2.80-12.35 RTW-Ex in isolation; OR=1.21;95% CI 1.13-1.29

Note. & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

Author(s)	Aim, RTW variable & design	*Study participants*				*Outcome measures*		Critical appraisal score & Key findings
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Predictor variables**	**Outcome variables**	
Besen et al. (2015).	To test psychosocial predictors of RTW outcome RTW-Ex Observational prospective	241 LBP <14 days	Employer, ED, and primary care referrals USA	18-63 M:130, F: 111 46%	100% 76% “Blue collar” work	RTW-Ex: Expected no. of days until RTW PCS TSK RTW self-efficacy scale (RTW confidence)	RTW outcome at 3 months including: No. of days absence No. of days with work limitation Overall work status	14/18 RTW directly related to RTW confidence and RTW-Ex Study demonstrated clear link between RTW expectations and its effects on RTW outcome Correlations: Days of absence: -0.19 ($p < 0.01$) Days with work limitation: -0.28 ($p < 0.001$) Work status: -0.42 ($p < 0.001$)

Note: & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

Author(s)	Aim, RTW variable & design	*Study participants*				*Outcome measures*		Critical appraisal score & Key findings
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Predictor variables**	**Outcome variables**	
Murgatroyd et al. (2016).	To determine predictors of time to RTW following motor vehicle accident (MVA) RTW-Ex Observational prospective	334 Upper or lower limb # <14 days	Two trauma hospitals Australia	>18 Mean= 36 M:267, F: 67 20%	100% n/d	RTW-Ex: "How long do you think it will take you to return to your usual activities? " i.e. More or less than 90 days	-date of RTW if applicable -RTW status at 6, 12, & 24 months	17/18 A shorter RTW was strongly associated with RTW-Ex <90 days Cox proportional hazards regression for predictors of time to RTW: RTW-Ex <90 days: Hazards rate ratio = 2.099; 95% CI 1.494-2.949, P <0.001

Note. & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

3.7.3.Studies that evaluated workplace supports

Tables 3 and 4 show the information extracted from each study and including critical appraisal of the studies examining WS.

Study designs

Five studies employed qualitative methodologies, all undertaking participant interviews to collect data. With the exception of Wrapson and Mewse (2011) who chose not to use a theoretical framework to inform the TA performed as part of their study, there were a variety of theoretical approaches and perspectives that informed or guided the studies. These included modified grounded theory (Kosny et al., 2013), interactionist (Maceachen, Kosny, & Ferrier, 2007), naturalistic (Lysaght & Larmour-Trode, 2008), and grounded/ critical realist perspectives (MacEachen et al., 2010). The remaining two articles were quantitative designs. Amick et al. (2017) was an observational, prospective study of organisational policies and practices (OPP), and L. Shaw et al. (2008) employed a retrospective case study approach of workers within one large company's injury management programme.

Study participants

It should be noted that other, non-injured participants were included along with the injured participants recruited in some of the qualitative studies. These included supervisors, co-workers, union representatives and case workers. As these participants were not themselves injured, they are not featured within the participant information and findings.

In the qualitative studies, the number of injured participants ranged between 8-37. In the quantitative studies, 184 (L. Shaw et al., 2008) and 577 participants (Amick et al., 2017) were recruited.

With regards to the acuity of participants' injuries, there was greater variety in the qualitative studies. Maceachen et al. (2007) and MacEachen et al. (2010) did not report

on the acuity of their cohort. Wrapson and Mewse (2011) interviewed participants within three months of experiencing a LBP episode and Lysaght and Larmour-Trode (2008)'s cohort were within 12 months of experiencing their injuries. In contrast, the final study involved three participants that identified as being 6-20 years post-injury (Kosny et al., 2013). In the two quantitative studies, all participants were considered acute. Amick et al. (2017)'s cohort were recruited between 0-14 days post injury and L. Shaw et al. (2008)'s group were recruited within their workplace on the day of suffering their shoulder injury.

In terms of the types of MSD, one study focussed upon LBP (Wrapson & Mewse, 2011), while another did not disclose the site of injury in any of their participants (Lysaght & Larmour-Trode, 2008). Within the remaining qualitative studies, participants reported a variety of injury sites including the head, wrist or hand, knee, and back. In the quantitative studies, one dealt exclusively at shoulder injuries (L. Shaw, et al., 2008), whereas Amick, et al. (2017) involved back and upper extremity cases.

All but one study was conducted in Canada. The remaining study was conducted in New Zealand (Wrapson & Mewse, 2011).

Participant age was reported in various ways. In two qualitative studies the mean ages of the participants were described, these were 48 and 51 respectively. Otherwise, studies reported overall age ranges between 24-69 across the studies. Three of the five studies only recruited participants above the age of 30. One study did not specify the upper limit of participant age within the study nor was a mean age given (Amick, et al., 2017).

One study only included male participants (Kosny et al., 2013). Otherwise, with the exception of Lysaght and Larmour-Trode (2008), where 77% of participants were female, all studies involved more male participants than female. In L. Shaw et al. (2008), only 13% of participants were female. In contrast, the remaining studies were relatively more balanced in terms of gender having between 35-45% of female participants within their cohorts.

Only MSD were investigated in both quantitative studies. With regards to the qualitative studies, three included participants with non-musculoskeletal or unknown injuries. The percentages of MSD cases in these studies was 86%-94%.

The entire cohort of Kosny et al. (2013), being electrical workers, were determined to be in physical roles. Three studies including both quantitative studies and Lysaght and Larmour-Trode (2008), did not describe the work intensity of their cohort. In the remaining three studies, 59%- 90% of participants had physical roles.

Levels of support

All levels of WS (horizontal, vertical and organisational) were represented across the studies collected. One study was based upon co-worker supports (Kosny et al., 2013). Supervisory supports were the main focus in Lysaght and Larmour-Trode (2008) and Wrapson and Mewse (2011). The remaining four studies primarily delved into various aspects of organisational support, however in some of the qualitative studies retrieved, the various levels of WS overlapped. For example, in one study, co-worker supports were discussed in relation to organisational support within the workplace (Kosny, et al., 2013).

Critical appraisal scores

Amick et al. (2017) lost marks for utilising a secondary dataset from another prospective study, and achieved a final score of 13/18. L. Shaw et al. (2008)'s retrospective case study scored poorly by comparison with all other studies critiqued using the ROBA, scoring just 5/18. After losing three marks in the study attrition section, the study displayed no eligibility criteria, no measurement of confounding factors, it failed to include a valid or reliable predictor measure and provided no statistical analysis of results. This study was therefore considered to have a high risk of bias.

The five qualitative studies were assessed against the standards of the JBI tool. All studies achieved a score between eight and nine points of a possible ten, indicating that the qualitative studies were conducted and reported upon fairly rigorously. When comparing the scores of the studies, all scored marks for demonstrating congruity

between philosophical perspective and research methods, and similarly, congruity between research methods, objectives, data collection, analysis, and interpretation. The one exception was Wrapson and Mewse (2011) who did not state a philosophical perspective to inform their research methods. However, this study was the only qualitative study to score a mark for addressing the influence of the researcher on the research and vice-versa (Wrapson & Mewse, 2011). Only Lysaght and Larmour-Trode (2008) failed to display evidence of ethical approval being gained, and with the exception of one study, all researchers located their research theoretically (Wrapson & Mewse, 2011). All studies were deemed to have drawn conclusions from the analysis or interpretation of the data.

3.7.4. Study findings (workplace supports)

All seven WS related studies examined relationships between WS and RTW. One clear distinction between the studies was whether a study primarily investigated the presence or the absence of WS in relation to RTW.

Three studies presented findings that indicated that the presence of WS facilitates RTW (Amick, et al., 2017; Shaw, et al., 2008; Lysaght & Larmour-Trode, 2008). Amick et al. (2017) reported that the presence of work-supportive OPP were able to predict RTW at six months. L. Shaw et al. (2008) found a strong correlation between the number of days taken to provide workplace accommodations to the injured worker and elapsed time to RTW. The qualitative study to report on the presence of WS was Lysaght and Larmour-Trode (2008), who concluded that participants identified trust (between co-worker and worker, and supervisor and worker) effective communication, and knowledge and understanding of the injury from the workplace, to be salient features of successful RTW processes.

A further three studies looked into how the absence of WS, including negative actions from the workplace, affected RTW. MacEachen et al. (2007), and MacEachen et al. (2010) explored the personal experiences of injured workers and other RTW

stakeholders and identified RTW barriers created by inadequate WS. One study that involved participants who had sought the assistance of peer support groups found that injured workers reported feelings of being misunderstood and unfairly treated by their peers and employers, along with being unable to navigate the workers' compensation systems they were faced with, described as an uneven playing field (MacEachen, et al., 2007). Examples of WS that were in some cases reported to be lacking in this study included assistance with claims, finances and RTW negotiations, and understanding from system providers. This was reported to lead to suspicions of malingering behaviour and feelings of defensiveness and punishment (MacEachen, et al., 2007). Problems with organisational dynamics across RTW systems including the workplace were identified in MacEachen et al. (2010). These damaging effects were described as being a "toxic dose", in affecting the worker beyond the initial injury. Issues such as co-worker resentment of an imposition of an injured worker's workload, the superior knowledge and resource position of employers in comparison to injured workers, and financial incentives for employers to reduce or even disallow injuries were presented to illustrate scenarios which led to an absence of WS (MacEachen, et. al., 2010). In the third study, the role of co-workers in relation to the factors that facilitated and hindered WS was discussed (Kosny et al., 2013). In addition to the structure of work in the electrical sector, a focus on cost-cutting and competition, job insecurity, having "different camps", poor formal communication and the limited availability of modified work were reported to impede co-worker support and, in turn, RTW. It was also noted that management have a pivotal influence over co-worker support (Kosny, et al., 2013).

The final study by Wrapson and Mewse (2011) presented findings supporting that an absence of WS can postpone RTW. However, the nature of WS in some cases was reported to be dependent on the interpretation of the injured worker or the supervisor. For example, supportive actions such as "early contact" from the supervisor was in some cases considered positive by some participants, yet was considered negative in other cases. Furthermore, this study was unique in that it explored whether the nature of interactions between supervisor and worker changed over time through contacting the participant one or sometimes two occasions after the initial interview. Following the initial

supervisor responses to the participants' injuries, three types of subsequent responses were identified, with only one response being deemed as constructive, pro-active and therefore conducive to the participant's RTW. Difficulties providing workplace accommodation offers, the planning of meetings that never eventuated, and queries from employer leading to participant fears for job security were examples of "apathetic" and "negative" subsequent responses discussed in the study.

Table 3

Workplace Supports Studies Results (Qualitative)

Author(s)	**Aim, RTW variable & design**	***Study participants*** **Sample size, type of injury & acuity**	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Critical appraisal score & Key findings**
MacEachen et al. (2007).	To report on systemic and compliance related barriers during RTW in understanding return-to-work successes or failures WS (organisational) Interactionist approach	37 MSD n/d	Peer support group membership →direct telephone contact Canada	30-69 M: 23 F: 14 37%	89% 59%	9/10 Unexpected barriers were experienced by injured workers navigating RTW processes. Themes including being misunderstood by peers and system providers, a need for advocates and the need for assistance with the procedural complexities of RTW, and an un-even playing field were presented.

Note: & = and, n/d = not disclosed, # = fracture, % = percentage, no.=number, Occ.= occupational, →= leads towards, > = greater than, < = less than, x = times, → = led towards, M= male, F= female.

Author(s)	Aim, RTW variable & design	Study participants Sample size, type of injury & acuity	Method of recruitment & country	Age, gender & % female	% of MSD & work intensity	Critical appraisal score & Key findings
Lysaght and Larmour-Trode (2008).	To explore supervisory workplace support and to identify salient features for work re-entry WS (vertical) Naturalistic approach	18 MSD <12 months post injury	Recruited from departments in a mid-sized municipality Canada	24-61 (Mean =48) M:4 F:14 77%	100% n/d	8/10 Supportive and unsupportive behaviours in RTW discussed. Themes presented included trust between co-worker and worker and between supervisor and worker, communication regarding and knowledge of disability, which were identified as key precursors to successful RTW processes in this study. WS domains categorised as informational, instrumental, appraisal and emotional support.

Note: & = and, n/d = not disclosed, # = fracture, % = percentage, no.=number, Occ.= occupational, →= leads towards, > = greater than, < = less than, x = times, → = led towards, M= male, F= female.

Author(s)	Aim, RTW variable & design	*Study participants*				Critical appraisal score & Key findings
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	
MacEachen et al. (2010).	To gain an understanding of systemic and process-related problems affecting injured workers WS (organisational) Critical realist perspective/ Grounded theory analysis	34 MSD >3months	Worker's compensation database Canada	Mean = 51 M:20 F:14 39%	94% 90% blue collar work	9/10 Themes: Several identified issues appeared to have damaging effects on workers in the form of a 'toxic dose' in affecting the worker after the injury (workplace problems, worker's compensation problems, RTW problems) Problems were linked to RTW policies that did not easily accommodate conflict among RTW parties and by social relations/ processes that impeded communication about RTW issues

Note: & = and, n/d = not disclosed, # = fracture, % = percentage, no.=number, Occ.= occupational, →= leads towards, > = greater than, < = less than, x = times, → = led towards, M= male, F= female.

Author(s)	Aim, RTW variable & design	*Study participants* Sample size, type of injury & acuity	Method of recruitment & country	Age, gender & % female	% of MSD & work intensity	Critical appraisal score & Key findings
Wrapson and Mewse (2011)	To explore perceptions of supervisor support at different time points in the RTW process WS (vertical) Thematic analysis	16 LBP <3 months	ACC database New Zealand	24-63 M:9 F:7 43%	100% 66% blue collar work	8/10 Themes discussed included that employers often postpone actions RTW interventions which delays RTW for the injured worker. WS nature depends on perception Two types of initial supervisor responses identified: “see you later” & “get it right” Three subsequent supervisor responses (proactive, apathetic, negative) Only proactive involved actions to encourage RTW Study shows that interactions can change over time

Note: & = and, n/d = not disclosed, # = fracture, % = percentage, no.=number, Occ.= occupational, →= leads towards, > = greater than, < = less than, x = times, → = led towards, M= male, F= female.

Author(s)	Aim, RTW variable & design	Study participants Sample size, type of injury & acuity	Method of recruitment & country	Age, gender & % female	% of MSD & work intensity	Critical appraisal score & Key findings
Kosny et al. (2013)	To determine the role that co-workers play during the RTW process WS (horizontal) Modified grounded theory	8 MSD (knee, back, hand/wrist) Varied (3x <1 year, 3x <5 years, 1x <10 years, 1x <20 years)	International brotherhood of electrical workers Canada	>40 - >60 M:8 0%	87.5% 100% blue collar	9/10 Themes identified; poor co-worker influences RTW. Co-workers influenced by factors such as; Cost-cutting, competition, job insecurity, different camps, little modified work, poor communication Issues prevented positive co-worker support and hindered RTW Co-worker behaviour shaped by management behaviour

Note: & = and, n/d = not disclosed, # = fracture, % = percentage, no.=number, Occ.= occupational, →= leads towards, > = greater than, < = less than, x = times, → = led towards, M= male, F= female.

Table 4

Workplace Supports Studies Results (Quantitative)

Author(s)	**Aim, RTW variable & design**	***Study participants***				***Outcome measures***		**Critical appraisal score & Key findings**
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Predictor variables & method of assessment**	**Outcome variables**	
L. Shaw et al. (2008).	To evaluate a company's workplace management of shoulder injuries WS (organisational) Retrospective case study	184 Shoulder injuries acute stage <1 day	Recruited from within the automotive manufactur-ing plant they worked at Canada	18-45 M: 159 F: 25 13%	100% n/d	WS: Company's workplace management programme compared with industry standards No. of days from injury to be placed on modified duties Organisational values: Respect for all involved→ identify central RTW issue through problem solving →progressive modified duties→ total involvement	No. of days to full RTW (in comparison with industry standards)	5/18 Strong correlation (r= 0.917, P<0.001) between No. of days to be placed on modified duties and elapsed time to RTW Majority of workers achieved RTW faster than industry standards 73% achieved faster RTW than Reed's medical standard, 80% faster than Workplace insurance board standard

Note. & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, , USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

Author(s)	Aim, RTW variable & design	*Study participants*				*Outcome measures*		Critical appraisal score & Key findings
		Sample size, type of injury & acuity	**Method of recruitment & country**	**Age, gender & % female**	**% of MSD & work intensity**	**Predictor variables**	**Outcome variables**	
Amick et. al. (2017).	To examine the role of worker reported organisational policies and practices in RTW and work role functioning WS (organisational) Observational prospective	577 back or upper extremity injury <14 days	Workplace safety and insurance board (WSIB) claim files Canada	>15 M:316 F: 261 45%	100% n/d	WS: OPP support questionnaire: -people oriented culture, safety practices, disability management policies, ergonomics policies and practices Mediating variables: -Pain self-efficacy, work accommodation	Work role functioning (WRF): 0= NO RTW, 1=RTW+ limitations >10% of time, 2= RTW+ limitations <10% of time RTW status: 1=RTW, 0= no RTW	13/18 OPP predicted RTW at 6 months (OR= 1.77; 95%CI 1.07-2.93) and at 12 months (OR=2.07;95% CI 1.18-3.62) OPP effects were significant at 6 months for the transition from not working/ limited work to working without limitations (OR=3.21;95% CI 0.99-2.75) and at 12 months (OR= 2.13; 95% CI 1.37-3.30)

Note. & = and, n/d = not disclosed, # = fracture, % = percentage, CI= confidence interval, ED= emergency department, no.=number, Occ.= occupational, OR = odds ratio, PCS= pain catastrophising scale, TSK= tampa scale for kinesiophobia, > = greater than, < = less than, x = times , → = led towards, USA = United States of America, +ve = positive, -ve = negative, i.e. = that is to say, M= male, F= female.

3.8. Study One discussion.

It would be an understatement to say that designing an appropriate strategy for study one was a challenge. The studies investigating the effects of RTW-Ex and WS differed in terms of the types of methodologies they were suited to, and there was great contrast between the relative depths of research available within these two topic areas. There were five in-depth qualitative studies available on WS, compared with no qualitative studies investigating RTW-Ex. However, there was considerably less empirical evidence available on WS in comparison to RTW-Ex. Lysaght, Fabrigar, Larmour-Trode, Stewart, and Friesen (2012) support this finding in reporting that quantitative WS research on work re-entry is scarce. To give an example, Amick et al. (2017) claimed that their study was the first in existence to provide evidence that RTW in WD is at least partially driven by organisationally oriented WS.

The results from the pilot literature review demonstrated that it would be difficult to design a search that would be sensitive enough to locate both types of studies I was interested in while being able to review for relevant literature. After a series of refinements, a more appropriate search strategy was developed. This strategy was sensitive enough to locate studies investigating both RTW-Ex and WS, whilst excluding studies that did not meet the needs of study one.

Two main advantages of this were that it was specific enough to return a workable amount of WS studies given the scarcity of available WS literature, all the while being sensitive enough to also return appropriate RTW-Ex related studies.

By synthesising this arguably heterogenous mix of literature, some clear discussion points have materialised. When relating these findings back to the aim of study one, the systematic literature review demonstrated that regardless of methodological orientation, all studies reported in their findings that RTW-Ex or WS had a measurable effect or meaningful impact on RTW. Furthermore, it was identified that the effects of RTW-Ex and

WS on RTW were dependent on the nature of RTW-Ex, or the WS provided. This trend extended across the range of study populations and working environments, all with their own unique personal and contextual circumstances.

Return-to-work expectations

There was consistency across the studies in terms of aims and research design, and by and large, the characteristics of the participants were comparable. Given the inclusion criteria for RTW-Ex studies, all participants were considered “acute” and were similar in terms of age and type of injury sustained. There was some variety in gender mix across the studies. There were no non-MSD cases. in fact, all studies with the exception of Murgatroyd et al. (2016) involved participants with LBP. Across a diversity of methods used to measure RTW-Ex and RTW within study one, high RTW-Ex consistently predicted favourable RTW outcomes. Equally, low RTW-Ex consistently predicted poorer RTW outcomes.

“Appropriate” return-to-work expectations

No studies within study one made reference to healing timeframes within their cohorts. An issue this may raise is that workers with more serious MSD may expect RTW to take longer, or have “low” RTW-Ex, for example greater than three months. However, the RTW-Ex of such workers will likely be *appropriate* in relation to the severity of the MSD they have sustained. The majority of studies included within study one involved LBP and it could be argued that this type of MSD would not normally require a longer healing timeframe i.e. greater than three months (Reme et al., 2012). This may then explain why the only non-LBP study, which involved injuries that arguably require a longer healing timeframe (broken bones owing to motor vehicle accidents) set RTW status follow up to six months, not three (Murgatroyd et al., 2016). In any case, referencing healing timeframes may assist the readers of RTW-Ex studies in identifying what could be considered “normal” or “appropriate” in relation to the MSD sustained.

Given the overall aim of this research area, which is to investigate the use of psychosocial factors to predict long-term WD, there may then be scope in clinical

practice to triage clients based instead on whether their RTW-Ex are appropriate to the severity of the injury sustained. This would ensure that those with low but *appropriate* RTW-Ex are not incorrectly identified as having psychosocial risk factors, and are instead assessed against a more appropriate benchmark. For the types of injuries within study one for example, three months could be an appropriate reference time point as MSD are not normally considered "acute" after this stage (Sullivan et al., 2005). The use of such benchmarks may have applications for VR providers who may then be able to identify cases that deviate from the expected timeframe at the earliest possible time.

Re-aligning return-to-work-expectations

If a worker's RTW-Ex can be considered "appropriate" or "inappropriate" in relation to healing timeframes, the question of whether their RTW-Ex can be re-aligned by parties involved in the RTW process may be worth considering. Carstens et al. (2013) reported that the measurement of expectations over time has rarely been researched. In the RTW context, Reme et al. (2012) reported that it remained unclear whether RTW-Ex may be influenced during the RTW time course. Carstens et al, (2013) identified that recovery expectations were shown to decline in a cohort of LBP sufferers within a two-week period after pain onset and that having realistic, rather than high expectations were more advantageous (Carstens et al., 2013). However, this study did not report upon whether workers' RTW-Ex can be improved, or re-aligned. Furthermore, if RTW-Ex can be influenced, it is then questioned what, or who may effect such a change. Dunstan et al. (2013) reported that the opinion of the treating doctor was associated with the formation of RTW-Ex.

Therefore, the question of whether interactions between workers and medical providers such as treating doctors may have an influence on RTW-Ex, signifies a gap to be further explored within study two. If such parties were found to have a role in influencing RTW-Ex, even by advising on matters such as healing timeframes, interventions to further control workers' RTW-Ex may then be developed. This possibility may have implications for long- term WD prevention.

Assessing return-to-work expectations

Whether seen as a strength or a limitation, there were contrasting methods employed to measure RTW-Ex in study one. Although all studies identified an association between RTW-Ex and RTW, the variety of outcome measures used may have made it more difficult to quantify the strength of this relationship.

Turning our attention to current VR practice in New Zealand, I contemplated whether the lack of a consistent or "standardised" approach to RTW-Ex measurement may contribute to why RTW-Ex have yet to become a regularly used tool in clinical practice, at least in New Zealand. From a pragmatic standpoint, the measurement of RTW-Ex poses no time or financial resources, and in referring to section 2.1.1. "costs and trends of WD", its absence does not appear to be caused by a lack of demand. As Reme et al. (2012) report, if risk factors of long-term WD can be reliably assessed early, there should be no need for services to wait for the development of chronic disability factors to surface.

Assessing return-to-work

In spite of the diversity in the choices of outcome variables used to assess RTW across study one, all studies employed some form of "work status" outcome measure, and all assessed at either three or six months. This loosely aligns with expected healing timeframes for most MSD (Parziale, 2001). In referring back to 3.7.2.- "study findings (RTW-Ex)", two studies within study one included additional RTW status related outcome measures such as days with limitation, and current physical restrictions (Besen et al., 2015; Reme et al., 2012).

Studies including such variables may better reflect the viewpoint that RTW may not be a "black and white" outcome, but a more series of incremental stages working towards the achievement of a RTW goal. In response to an abundance of research promoting the positive effects of an early return to work (Tjulin, Maceachen, Stiwne, & Ekberg, 2011), workers receiving various WS actions such as workplace accommodations including shortened hours or modified duties is now commonplace, at least in New Zealand's VR practices. In again referring to the debate as to whether RTW-Ex can be influenced

during time course (Reme et al., 2012), the potential for such supportive actions within the workplace to influence RTW-Ex also remains to be confirmed. Therefore, this identified gap is also put forward to be further examined within study two.

It could be reasonable to assume that work-supportive actions such as offering light duties to a worker may influence their RTW-Ex for full duties. Rather than being at home, returning to the workplace would presumably give the worker a better benchmark to measure their current injury limitations against. If this is the case, there could be scope to break RTW-Ex down into sub-categories such as “light duties” RTW-Ex and “full duties” RTW-Ex, when relevant, which could lead to the development of more accurate and relevant interventions for workers.

There are other factors that would presumably have a significant influence over a worker’s RTW-Ex, or the success of efforts to influence RTW-Ex. Factors may include the nature of workers normal duties in terms of the heavy physical demands of a role which have have an influence over RTW (Shaw, Main, & Johnston, 2011), and the pre-injury functional capacity of the worker. To give an illustrative example, the RTW-Ex of a young, physically “fit” worker with a shoulder injury, who spends all day driving a car, may be initially higher, and more pliable than a much older, less physically “fit” worker with LBP whose role involves lifting heavy boxes all day. The effects of physical demands and the influence of a worker’s pre-injury capacity on RTW-Ex are also selected as gaps to assist the undertaking of study two.

Summary of return-to-work expectations

Through synthesising the findings of the literature available on the topic of RTW-Ex with current practice implications, three research gaps for further exploration in study two have emerged. Firstly, the idea that the opinions of treating medical providers may have an influential role in RTW-Ex will be explored. It was also discussed that relationships may also exist between a worker’s RTW-Ex and other factors such as the WS they receive, the nature of their work duties or their pre-injury capacity. Within this section, implications for the use of RTW-Ex in New Zealand’s clinical practice were also introduced, and will be further discussed in chapter five.

Workplace supports

In contrast to the RTW-Ex studies, a variety of aims and designs, both quantitative and qualitative were used to investigate WS within study one. There was greater diversity within the study participants, such as low percentages (<20%) of non-MSD cases being included in some studies. The greatest difference between RTW-Ex and WS study participants was the acuity of participants. As the majority of WS studies were qualitative, they were therefore exempt from the three month “acute MSD” inclusion criteria. Both quantitative studies included “acute” MSD participants ranging between 0-14 days post-injury. However, only one qualitative study included participants that all experienced their injuries within three months of the initial interview and therefore, could be considered “acute”. The fact only one “acute” qualitative study was retrieved may provide some justification to the decision made in 3.2.- definition of terms to include non-acute qualitative studies within the review.

It has been reported that efforts to reduce WD often target the worker, rather than the organisation (Amick, et al., 2017). Therefore, WS were chosen within this thesis in order to investigate relationships between worker and workplace. MacEachen et al. (2010) reported that it has been argued for almost two decades that problems as multi-faceted as RTW require analytic focus at different levels including the individual, the workplace and systemic levels. By organising studies within study one not only by research design, but by how WS was related to the hierarchical framework for WS, a clearer view of WS within the workplace environment could be visualised.

The following section presents themes that were identified across the WS studies. These themes were the product of the synthesis of the WS literature within study one. This step was taken in order to again better organise the complexities of the topic, to then facilitate further exploration within study two.

Trust

Trust was an over-arching theme to emerge from the WS literature in study one, as it appeared implicitly or explicitly as a commonality throughout the retrieved studies

regardless of design, level of support or whether the study investigated the presence or absence of support. Trust was broken down into “trust in other people” and “the organisation”. Within these two headings, the following concepts are presented; “accepting the legitimacy of injuries”, “earning trust” and “the limits of trust”, along with “trust through company values”, “organisational influence”, and “trust through worker value”.

Trust in other people

Accepting the legitimacy of injuries

The bonds of trust between worker and co-worker, and worker and supervisor, as a mediator of WS was discussed by Lysaght and Larmour-Trode (2008). It was reported that participants found acceptance from their employers with regards to the legitimacy of their injuries to be a fundamental for receiving support (Lysaght & Larmour-Trode, 2008). Some of the key elements identified within this study were termed “soft” features, or actions such as showing empathy, compassion and understanding which built rapport and in turn, trust. However, tangible WS features such as supervisors being proactive and approving time off to attend medical appointments, or extra efforts from co-workers on the behalf of the injured worker demonstrated trust (Lysaght & Larmour-Trode, 2008). From the workers’ perspectives, such actions confirmed that the workplace accepted the legitimacy of their injuries, as these actions qualified support in their view (Lysaght & Larmour-Trode, 2008).

Earning trust

Wrapson and Mewse (2011) reported that some participants felt as though they needed to go to great lengths to earn trust. Some felt the need to validate their physical incapacity to their work colleagues after their injuries. Kosny et al. (2013) reported that co-workers were more likely to offer support towards an injured worker if they had a strong, long-term pre-existing relationship with that worker, or if they were well-respected in that they had “put in the time” in the industry. In contrast, being new to the workplace was reported to cast doubts over the veracity of the injury (Kosny et al., 2013). Lysaght

and Larmour -Trode, (2008) coined this as building “trust as a currency” in the workplace. WS was also influenced by co-workers witnessing the injury, or the injury being severe or visible (Kosny et al., 2013). This may have particular relevance to LBP because LBP often lacks visible signs of injury, and therefore can be difficult to validate or legitimise (Slade, Molloy, & Keating, 2009). Some co-workers distrusted injured workers due to suspicion that they were “milking the system” to get time off work or cushy jobs (Kosny et al., 2013). To this end, some workers experienced a conflict between carrying out personal or household tasks in the neighbourhood and not wanting work colleagues to suspect the worker was being deceitful (Wrapson & Mewse, 2011).

The limits of trust

Work-supportive actions facilitated through trust were indicated to have limits. It was reported that trust in an injured worker often waned when their recovery was prolonged, or when a worker experienced repeated injuries (Kosny et al., 2013). Furthermore, injured workers discussed instances where supervisors interpreted that their failure to attend modified work, or complete tasks as originally planned constituted malingering behaviour. From the workers’ view such trust-threatening scenarios would often develop when there was a mismatch between the worker’s current abilities and the situation they had been placed in (MacEachen et al., 2007).

In addition to having an influence on WS, these described issues relating to trust, led to workers feeling misunderstood, and stressed (MacEachen, et al., 2007; Lysaght & Larmour-Trode, 2008). This concept was termed the “discourse of abuse” and was reported to play a damaging role in the life of a worker faced with such a situation (Kosny et al., 2013).

Trust in the organisation

Trust within company values

The two studies evaluating workplace-based programmes could be viewed in terms of how the workplace-based programmes that were being tested dealt with trust. L. Shaw et al. (2008) reported that the entire programme was underscored by respect for all

involved. This entailed that the worker be valued, and the worker and supervisor were engaged and involved throughout the whole process. Similarly, the organisational policies and practices referred to in Amick et al. (2017) consisted of various organisational support strategies, such as people-oriented culture and safety practices. Such workplace- based programmes reflect the values of the company (L. Shaw, et al., 2008).

The results of these two studies indicate that WS strategies at the organisational level may be enhanced through incorporating values where trust is either explicit or inferred. However, taking into consideration the limited amount of literature available, and the methodological quality of some of the quantitative WS research retrieved within study one, these statements could be better supported with stronger evidence.

Organisational influence

Kosny et al. (2013) stated that the organisation plays a pivotal role by setting the stage for the RTW process, as they have the ability to either dispel the "discourse of abuse" or give it credence by discounting the worker. Co-worker and supervisory WS have been identified as playing a pivotal role in RTW processes (Lysaght & Larmour-Trode, 2008; Wrapson & Mewse, 2011), however their behaviours have been found to be prone to such organisation level influence (Kosny, et al., 2013). Issues such as a co-worker or supervisor's fear of risking their own job security in siding with the worker against an organisation were reported to influence behaviours towards injured workers (MacEachen et al., 2010; Kosny et al., 2013). Therefore, the organisation may be the most effective target for promoting trust in relevant WS scenarios due to its identified influence on other involved parties.

Trust through worker value

A final feature identified that may bear relevance to trust in the organisational context came in response to the notion that workers with substantially autonomous work roles, or where the worker's skills were unique or in demand were more likely to engage in RTW negotiations (Wrapson & Mewse, 2011). In such a scenario, the worker may perceive

greater job security because they are aware of their value to the organisation. Equally, the employer may also be inclined to offer greater WS to the worker owing to the demand their absence creates.

The concepts introduced were organised and represented within the theme of “trust”, which has been selected to further inform study two. The roles trust may play within the various WS situations described within study one will be expanded upon in order to address the aim of study two.

The second WS related theme “systemic issues” is introduced below.

Systemic issues

The second theme that emerged from my analysis of WS in study one were the over-arching “systemic issues” that the worker-workplace interaction was often situated within. These are described as three concepts; “financial pressure”, “modified work”, and “bureaucratic issues”.

Financial pressure

One issue that was reported to influence the provision of WS was the financial pressure that organisations faced. During RTW processes, it was reported that workers’ compensation systems may have taken advantage of this issue in ways such as by offering financial incentives that were designed to motivate employers to reduce the duration of a worker’s absence (MacEachen et al., 2010). Workers’ compensation systems were also reported to offer premium surcharge reductions for “preventing” injury-related absenteeism. In response, some workplaces would “disallow” an injury, by ordering the worker to stay onsite, despite having sustained an injury (MacEachen et al., 2010).

It was reported that some organisations struggled from a financial perspective when RTW programmes were required (Lysaght & Larmour-Trode, 2008). One study described RTW processes as being unaffordable, especially to smaller businesses (MacEachen et al., 2010). Furthermore, slow administrative processes, issues with recruiting short-term

substitute workers, and the need to provide extra support to co-workers when a unit had a worker on modified duties contributed to the mounting costs businesses faced during RTW processes (Lysaght & Larmour-Trode, 2008). Overall, these issues were reported to detract from the overall success of the programmes (Lysaght & Larmour-Trode, 2008). One study linked poor WS to the effects of organisations being too financially orientated (Kosny et al., 2013). Issues such as cost-cutting and in-house competition within an organisation were reported to lead to job insecurity, selfishness, and in turn an inability to support injured workers in RTW scenarios (Kosny et al. 2013). In this study, injured workers were held accountable for the organisation's increased workers' compensation costs. Furthermore, the injured workers were also accused of being responsible for a downturn within the organisation, leading to co-worker resentment and a lack of support (Kosny et al., 2013).

Modified work

Kosny et al. (2013) also described the that availability of modified work, also known as "workplace accommodations", was influential on WS. MacEachen et al. (2010) stated that a limited availability of modified work could be considered a warning signal for RTW problems. In other cases where modified work could be offered, it was discussed that "picking up the slack" may lead co-workers to reject the imposition of extra work due to an injured worker's incapacity. It was discussed that this may lead to resentment and hostility (MacEachen et al., 2010). Issues such as not being able to keep up with the physical demands or tempo of a job were also reported by Kosny et al. (2013), who added that in addition to co-worker frustration, such issues would in some cases lead to the worker being cast from the worksite, leading to feelings of isolation at a time when they were most vulnerable. Wrapson and Mewse (2011), reported that modified work was rarely offered in their study which led to longer and arguably unnecessary work absences in the early stages of recovery. In contrast, several supervisory and co-worker actions were reported to contribute towards an overall climate of support for the worker in another study (Lysaght & Larmour-Trode, 2008). Supervisory actions included reducing pressure or expectations of the worker, and checking that the provision of modified work

was appropriate for the worker. Co-worker actions such as moral support, and checking in to see if help was required were also described in relation to positive WS (Lysaght & Larmour- Trode, 2008). Furthermore, L. Shaw et al. (2008) presented findings that the early provision of modified duties as part of a support oriented RTW programme, was associated with an earlier RTW, however once again, these findings would be strengthened if higher quality empirical evidence was available.

Bureaucratic issues

Less tangible factors such as system bureaucracy were discussed in relation to its ability to cloud social relations, affect communication between employer and worker, and in turn, hinder WS (MacEachen, et al., 2010). It was also described that worker reports of encountering roadblocks when trying to navigate the systems germane to their situations led to them feeling financially threatened, powerless and misunderstood (MacEachen et al., 2007). In the New Zealand based study by Wrapson and Mewse (2011), worker and employer unfamiliarity with regards to the implementation of ACC RTW policies led to questions of responsibility with regard to whose role it was to make contact and organise RTW after injury. The process was described as an unfamiliar and awkward task by some supervisors and was reported to hamper employer-employee relations (Wrapson & Mewse, 2011). MacEachen et al. (2007) described the bureaucratic issues during the RTW process as akin to running on an “uneven playing field” and that current RTW policies pre-suppos self-reliance in that injured workers are able to advocate for themselves in pressure-free environments and are knowledgeable about their rights and responsibilities. In reality, it was reported that many workers are in emotionally precarious positions, are unaware of their rights and responsibilities and cannot advocate for themselves due to power imbalances with employers (MacEachen, et al., 2007). The common threads of simplistic RTW programme logic along with how systemic challenges inherent in RTW appear to have effects on the worker in the form of a “toxic dose”, in affecting the worker beyond the initial injury (MacEachen et al., 2010). Through further synthesising the literature within study one, a final gap that may inform the next stage

has materialised. The theme “systemic isssues” will also be integrated into the methods used to address the aim of study two.

Summary of workplace supports

The lack of fit between the requirements of RTW programmes and systemic issues such as the orientation of organisations, which exist to make money (MacEachen et al., 2010), was reported to have a bearing on WS. Along with this, WS may also be influenced by other systemic issues including complications regarding modified work, and bureaucratic issues. In addition to systemic issues, trust was also identified as a WS theme, with links extending between worker and co-worker, worker and supervisor and worker and organisation. “Trust” and “systemic issues” constitute two clear and organised themes that have emerged as gaps from the synthesis of the results of study one. These two gaps are brought forward to guide the implementation of study two.

Study One summary

The effects of RTW-Ex were presented along with discussing concepts which led to the identification of three gaps. It is unclear whether RTW-Ex can be influenced or “re-aligned. Therefore, the role of medical providers, WS and factors such as workers’ pre-injury capacity and the demands of working roles are brought forward to address in study two. In the case of WS, the various gaps identified throughout the synthesis were organised into two main themes; “trust” and “systemic issues”. This decision to integrate a variety of concepts in two WS themes was made to enable a more focussed and specific approach to addressing study two. What remains to be seen is what more can be learned about how these gaps could be better addressed in RTW practice, from seeking to understand the perspectives of those currently experiencing it. Study two will then explore whether there is resonance between what is discussed within study one, and the experiences of the participants of study two, living in the Northland region of New Zealand.

4. STUDY TWO- QUALITATIVE INTERVIEW STUDY.

Study two- qualitative interview study addresses the following research question:

-What can acutely injured workers in New Zealand teach us about how the effects of RTW-Ex and WS could be effectively addressed within the VR process?

Firstly, I present a brief section locating study two with regard to theoretical orientation as discussed in chapter two, part II. Following this, I re-iterate the findings of study one in demonstrating how they influenced the strategy for study two. I then give a brief account of relevant logistical and ethical considerations which influenced the interviewing process before the study's methods are described. Finally, the results and findings are presented and discussed.

4.1. Theoretical orientation.

In chapter two I presented some of the assumptions I brought into study two through providing a summarised account of my researcher interview. In philosophical underpinnings I then introduced the "social constructivist" framework along with the reasons for why it was chosen as the most appropriate framework to guide interpretation within study two. In this section I also described in detail four philosophical assumptions which collectively act as a "scaffold" to reinforce the chosen framework and in turn, the entire research process (Crotty, 1998). These philosophical and methodological considerations were taken in light of the context this research was situated within, in showing how it influenced the selection of TA as the method for the collection and analysis of data. These guiding principles were considered in light of the findings of study one, and assisted in the design of the strategy for study two, presented in the next section.

4.2. Study One informing Study Two.

Study one confirmed the effects of RTW-Ex on RTW, in that low RTW-ex were shown to predict poorer outcomes, and high RTW-Ex were shown to predict favourable RTW outcomes. The findings of study one also led to the identification of research gaps which inform study two. The aim of study two was to learn *how the effects of* RTW-Ex and WS may be better addressed through exploring injured workers' perspectives. Study one presented the effects of RTW-Ex and WS in relation to RTW outcome, but also identified gaps that directed study two towards "*how"* these effects may be influenced and in turn, assisted in addressing the aim of study two. To facilitate the process of learning *"how"* from the workers' perspectives, these identified gaps were developed into focussed questions, which acted as leads in exploring the participants' realities. These questions are introduced below.

Study one highlighted three gaps that may influence RTW-Ex; medical providers, WS, and physical factors being the nature of a worker's role and pre-injury function. In study two these were translated into the following research questions: "*can RTW-Ex be influenced by medical providers?", "can RTW-Ex be influenced by WS?"* and *"can RTW-Ex be influenced by factors such as pre-injury function or physicality of working role?".* With regard to WS*,* the two identified themes "trust" and "systemic issues" were also converted into the questions; "*can trust influence WS, and in turn, RTW?"* and *"can systemic issues influence WS, and in turn, RTW?"*

4.3. Process considerations.

Once the findings of study one had been confirmed along with the selection of a philosophically informed framework for guiding study two, ethical approval to conduct a qualitative interview study was necessary. As part of the ethical approval application process, and in an effort to ensure that study two would promote ethical and inclusive research practices, I sought a meeting with Tiaho Trust, located in Whangarei,

Northland. Several considerations were raised at that meeting, which are summarised below. I also participated in interviewing skills training sessions prior to undertaking any interviews. This included three trial interview and feedback sessions from Auckland University of Technology (AUT) staff members, each with extensive experience in conducting qualitative research. Finally, prior to analysing any data I attended a TA skills workshop delivered by a vastly experienced researcher who has conducted research and authored works on TA. The workshop detailed key research considerations and assisted in confirming that reflexive TA would be a suitable method for study two.

The consultation meeting with Tiaho Trust was valuable in influencing how I approached my participants during recruitment and interviews. Firstly, it was advised that I view participants through the lens of the social theory of disability. The ways of thinking about disability have in the past been described as inadequate as a basis for social policy (Oliver, 1986). This has led to claims that disability is centrally structured by oppression, inequality and exclusion and is entirely socially imposed (Thomas, 2004). Social theory is invested in developing a social policy for disabled people that will be both relevant to their needs and which will improve quality of life (Oliver, 1986). It has also been influential in the development of more holistic approaches to rehabilitation (Thomas, 2004), such as the biopsychosocial approach and the ICF framework introduced in chapters one and two. From the perspective of Tiaho trust, this advice was given in order to divert participants from potentially thinking about themselves as being the problem. Rather, the focus should remain open to multiple societal perspectives.

Secondly, the notion that we are all “temporarily able-bodied” was put forward by Tiaho Trust. This view posits that we all will be disabled at some point in our lives and therefore should consider everybody using a “lowest-common denominator” health and disability approach in order to prevent anybody being unfairly or unequally treated. In terms of ensuring culturally appropriate practices during the interviewing processes, Tiaho trust also advised that the term “mana” which embodies prestige, honour and pride, and carries strong meaning within the New Zealand culture, be used as a guiding principle throughout the undertaking of the interviewing process. Finally, the consideration that

empowerment comes from helping others, not receiving help was discussed in order to help to think about what participants might be getting from participating in the study. The implementation of these strategies served to ensure that as a researcher, I would be facilitating an interview experience where participants would feel safe and comfortable.

After ethical approval was gained in August, 2018, it took seven months to recruit and interview the participants for study two. During this period, an amendment to the ethics approval had to be made to broaden the inclusion criteria as there was consensus among all of the VR clinics who had agreed to help recruit for the study that it was proving very difficult to find suitable participants who had been injured within six weeks. In October, 2018, an amendment was approved from Auckland University of Technology Ethics Committee (AUTEC) to enable the recruitment of participants up to 12 weeks post-injury. Due to the time constraints of the thesis, recruiting closed at the end of February, 2019.

4.4. Sample size.

Due to the time constraints placed upon this thesis, five participants were interviewed before recruitment closed. Although the initial target was eight, this was not considered to compromise study two once the diversity and richness of the sample was reviewed. Sample size is a fraught, contentious and debated topic in qualitative research (Terry et al., in press). Braun et al. (2018) urge that researchers be dubious of authors proffering simple formulae regarding sample size or methods to determine saturation as they invariably contain inbuilt assumptions. When taking into account pragmatic and contextual considerations, a “rule of thumb” for sample size for a small project assuming the data are rich, the sample homogenous and the research question focussed, is said to be at least five or six interviews (Braun et al., 2018). To this end, it is impelled that the main objective of TA research is the quality of data collection in that it produces rich accounts of patterns across the dataset (Terry et al., in press). In the case of this study, because there was a diversity in terms of participant experiences and demographics

within the study sample from the Northland area, five participants were sufficient to yield a rich analysis.

4.5. Methods.

This section outlines the methods used to collect and analyse the data of study two.

4.5.1. Recruitment and eligibility

A selection of VR clinics in the Northland region agreed to assist with the recruitment process. Their role was to invite potentially eligible participants that were undergoing VR with the VR providers. Participants were given an invitation sheet by the VR provider and were asked to either contact me directly or indicate to their VR provider that they would prefer that I contact them. During the initial phone call with me they were screened for eligibility.

Inclusion criteria;

-aged between 18-65

-could speak English fluently enough to participate in a face-to-face interview

-had sustained an injury (to muscles, tendons, ligaments, bones or joints in any area of their body) within the past 12 weeks that had stopped them from being able to perform their normal work

-were currently employed with one company for a minimum of 30 hours per week immediately prior to the injury and had not since been stood down or made redundant

Exclusion criteria:

- were a sole-trader or a business owner

-had not yet been medically cleared to make a full return to normal work

- had a significant pre-existing disability

One potential participant made contact with the researcher but later declined the invitation to participate in the study. The remaining participants screened were all eligible and went through to participate in the study.

4.5.2. Data collection

Semi-structured interviews took place either within the participants' homes, at a neutral location, or at the participant's workplace in a private room. In keeping with AUTEC ethical approval conditions, prior to each interview, a researcher safety protocol was carried out in addition to participant informed consent. Each interview was captured using an audio recorder and later transcribed verbatim. All potentially identifiable information was removed from the transcript and the audio data and transcripts were securely and separately stored until the data analysis phase commenced. As another measure to ensure all participants could not be identified, prior to each interview was that they were asked to supply a pseudonym which would then be used in the later reporting phases.

4.5.3. Data analysis

I conducted an extensive analysis process in which reflexive TA was applied. In keeping with the six-phase approach that has been developed to conduct TA from, it is important to consider that this process was not linear, but more reflexive and recursive (Braun et al., 2018).

The six phases are introduced below;

<u>Phase 1: Familiarisation</u>

In this initial phase, great time is taken to immerse oneself in the data. This process involves reading and re-reading data until it is known intimately which facilitates a deep

engagement with the data (Terry et al., in press). Familiarisation asks the researcher to casually be observant, to ask questions of the data, in relation to the research question, to ask questions of themselves in relation to their assumptions when making observations, but absolutely without coming to pre-mature conclusions. The results of the familiarisation phase are the generation of early provisional analytic ideas and, of course, close familiarity with the data (Terry et al., in press).

Prior to the coding phase, I both read (transcripts) and listened to (audio recording) all interviews on at least five occasions, taking casual notes on the transcripts and storing these notes using the comments function of Microsoft Word.

Phase 2: Coding

Generating codes involves the detailed and systematic creation of labels attached to specific segments of the dataset which have meaning relevant to the research question. Coding is an inclusive process, where all relevant data is tagged, and the coding labels are designed to capture the interpretation of the researcher. Coding is a way of synthesising a mass of data in organising it and researcher observations into patterns (Terry et al., in press).

In study two I carried out the coding process in the following fashion. First, I highlighted the relevant data extract within the transcript and inserted the corresponding code using the comments function on Microsoft Word. This phase involved repeatedly scanning the entire dataset until there were no more relevant codes to assign. The data extracts and their codes were then transferred onto a Microsoft Excel spreadsheet where the codes underwent revision and development, in order to consolidate and organise the generated codes. Good quality coding results in the production of codes that are deep, consistent and thorough, and that are able to identity patterning and diversity within the dataset (Terry et al., in press). Once I was satisfied with depth and consistency of the codes within the Excel spreadsheet, I commenced the theme development phase.

Phase 3: Theme development

This phase relies upon a deep understanding of the dataset through earlier familiarisation and coding. In this phase, candidate, or prototype themes are built, moulded and given meaning at “the intersection of data, researcher experience and subjectivity and research question(s)” (Braun et al., 2018, p.12). The construction of themes is based around grouping features of similarity and relationships across a range of different codes and then identifying a central organising concept that in essence, underpins the theme. In some cases, a code may be substantial enough to be promoted to a theme, in which case other codes can also then be brought under this theme. In any case, it is uncommon for candidate themes to survive the following phases, and it is therefore recommended to not get too attached to any constructed theme (Terry et al., in press).

When the coding process had reached its natural conclusion, the codes were consolidated and organised resulting in the creation of several provisional themes emerging directly from the dataset.

Phase 4: Revising themes

The reviewing phase is similar to a quality control exercise, in ensuring that themes work well in relation to the data, the codes, and the research question. This phase asks the researcher to evaluate whether their themes meaningfully capture what is contained within the dataset. To prevent thinness or conceptual overlap, the researcher looks into whether each theme accounts for what is coded in the data, whether there are sharp boundaries between the themes, and may even involve modifying the research question allow it to best capture the data (Terry et al., in press). If an acceptable balance of relatedness and distinctiveness can be drawn between each theme, they account for the coded data, and answer the research question within an overall theme story, then the next phase may be approached (Braun et al., 2018).

The candidate themes produced were the direct results of the coding process which organised the participants’ experiences into these meaning-based patterns. They were

considered to be acceptably balanced and related to one another but they tended to lose their connectedness with the research question and from the informing questions within study one that they were originally created through. The themes needed to be revised in order to better reflect these underpinning concepts, whilst also capturing what was contained within the dataset.

Phase 5: Defining themes

Defining theme name signals the scope and core of each revised theme and should cue the reader into what they can expect to read about in the theme (Braun et al., 2018). Within this phase, the researcher turns towards an interpretive orientation in ensuring the story is compelling and makes sense of the patterning and diversity of meaning (Terry et al., in press). With the later phases being iterative and recursive in nature, themes can be checked and modified as necessary to ensure a good fit to the research question and dataset. For example, a theme there is little to say about may be dropped, expanded upon, or enriched by going back to the dataset, or used as a sub-theme or particular aspect of a theme (Terry et al., in press). Equally a theme where the meanings contained are too complex may be split, or discarded (Terry et al., in press).

After a greater balance was struck in relation to the concepts, the data, and how it was interpreted, clearer, more consistent themes began to emerge. In accordance with the recursive nature of this phase, several themes were re-named, shifted or removed entirely, in settling upon the final themes. This led to a better “fit” of the themes in terms of how they related to study one and addressed the research question, but without compromising the richness of the participants’ experiences. Social constructivism assisted in orientating the analysis phase theoretically, and ensured that the “reality” of the participants’ experiences was illuminated within the presented themes.

Phase 6: Producing the report

The final phase, is not purely a writing-up exercise (Braun et al., 2018). The researcher weaves together data, analysis and other relevant literature into a singular output that answers the research question (Terry et al., in press). Within this stage it is

recommended to ensure that the epistemological position taken prior to commencing TA, continues to inform and influence the way data is treated (Terry et al., in press). It is also recommended to draw upon the checklist for writing good TA, by Braun and Clarke, (2006). This is presented in Table 5.

The findings of study two are presented in the next section.

Table 5
A 15-Point Checklist of Criterion for Good Thematic Analysis

Transcription	1.	The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for "accuracy".
Coding	2.	Each data item has been given equal attention in the coding process.
	3.	Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive.
	4.	All relevant extracts for all each theme have been collated.
	5.	Themes have been checked against each other and back to the original data set.
	6.	Themes are internally coherent, consistent, and distinctive.
Analysis	7.	Data have been analysed – interpreted, made sense of - rather than just paraphrased or described.
	8.	Analysis and data match each other – the extracts illustrate the analytic claims.
	9.	Analysis tells a convincing and well-organised story about the data and topic.
	10.	A good balance between analytic narrative and illustrative extracts is provided.
Written report	11.	Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over-lightly.
	12.	The assumptions about, and specific approach to, thematic analysis are clearly explicated.
	13.	There is a good fit between what you claim you do, and what you show you have done – i.e., described method and reported analysis are consistent.
	14.	The language and concepts used in the report are consistent with the epistemological position of the analysis.
	15.	The researcher is positioned as active in the research process; themes do not just "emerge".

Note. From: Using thematic analysis in psychology. Copyright 2006 by Braun & Clarke.

4.6. Study Two Findings.

4.6.1. Participant characteristics

The details of the participants within study two are presented in Table 6 below. In terms of ethnicity, the participants of study two either identified as being of New Zealand descent or New Zealand Māori descent. Participants whose workplaces were within the main urban region of Northland (Whangarei) were deemed to be in a "regional" location, otherwise the location was termed as being "rural". The physicality of the participants' roles were selected by the participants in terms of whether "physical", "sedentary" or "mixed" best described their usual working roles.

Table 6
Participant Demographic Information

Participant (pseudonym)	Gender	Age	Acuity of injury	Ethnicity	RTW status	Geographical location	Type of work
Phil	Male	51	11 weeks	NZ Euro	Partial RTW	Rural	Physical
Rayne	Female	24	8 weeks	NZ Māori	Partial RTW	Regional	Mixed
Jeff	Male	21	7 weeks	NZ Māori	Off work	Regional	Physical
John	Male	35	9 weeks	NZ Euro	Off work	Regional	Physical
Kiwiguy	Male	57	5 weeks	NZ Euro	Off work	Regional	Mixed

Note. NZ Euro = New Zealand European ethnicity, NZ Māori = New Zealand Māori ethnicity.

4.6.2. Theme presentation

Prior to presenting the themes constructed as a result of the six phase TA process, they are first introduced along with the focussed questions developed from the identified gaps of study one that assisted in the development of these themes. These are summarised below. Please note that these questions are no longer in the order in which they were presented earlier in section 4.2. in this chapter. Furthermore, during the TA process some questions needed to be modified to more appropriately reflect the participants' descriptions.

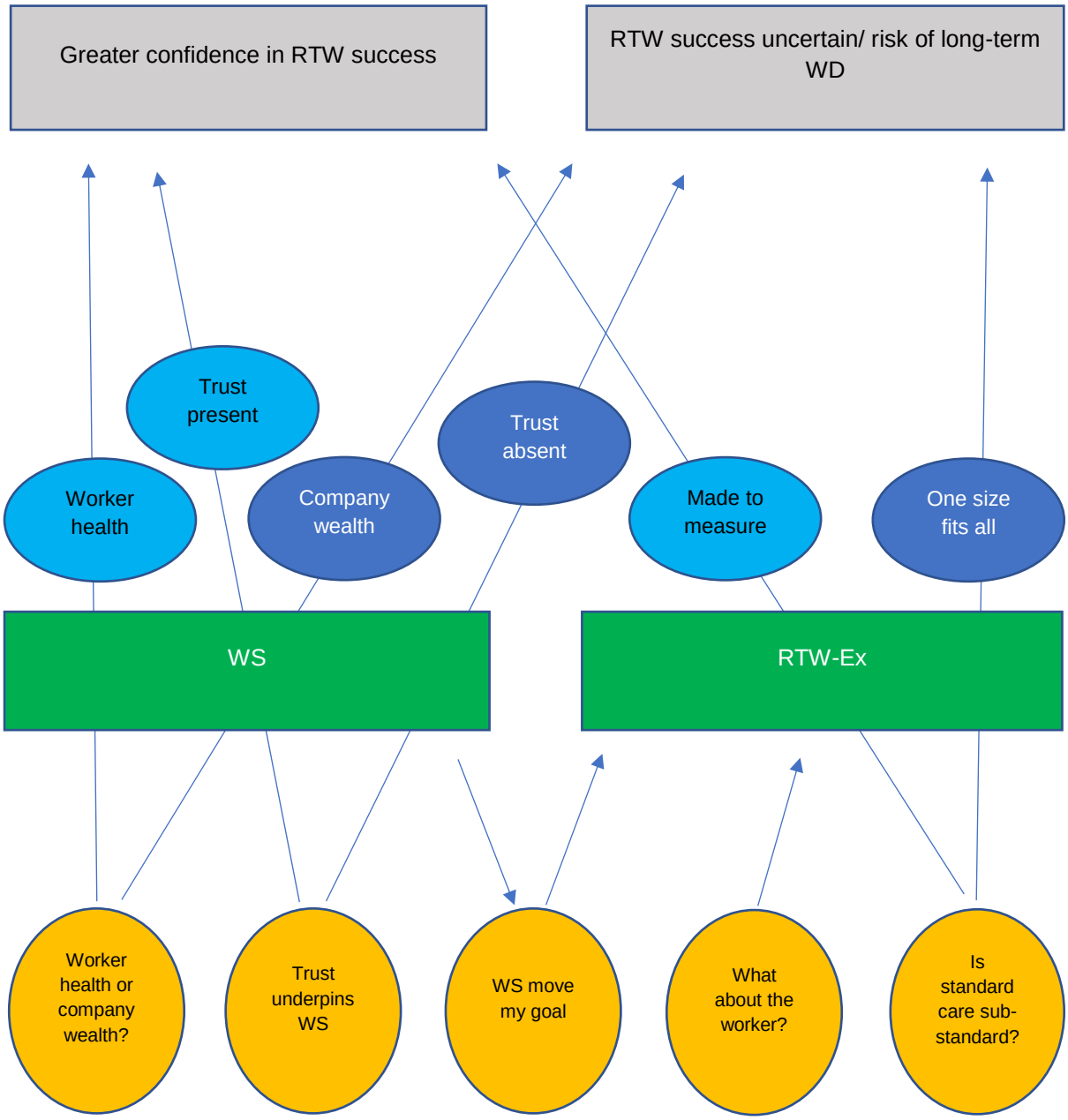
Three questions remained in their original form; The question *"can systemic issues influence WS, and in turn RTW?"* was addressed by the theme "worker health or company wealth?". The question *"can trust influence WS, and in turn RTW?"* was addressed by the theme "trust underpins WS". Also, the question "*can RTW-Ex be influenced by WS?"* was addressed by the theme "WS move my goal"

Two questions were modified; The question *"can RTW-Ex be influenced by medical providers?"* was modified to "*can RTW-Ex be influenced by medical or insurance providers?".* Therefore, this modified question was addressed by the theme "is standard care sub-standard?"

The question *"can RTW-Ex be influenced by factors such as pre-injury function or physicality of working role?"* underwent two revisions. *"Physicality of working role*" was shifted and was instead addressed within the previously introduced theme "worker health or company wealth?". Pre-injury function was modified to *"can RTW-Ex be influenced by worker identity?* Therefore, this modified question was addressed by the theme "what about the worker?"

The reasons behind the decision to modify these questions will be discussed further when the themes are presented. The final thematic map in Figure 5 gives an overview of

how the constructed themes fitted within the wider context that surrounds the topic. The themes are present within the thematic map in Figure 5 below.



Note. orange = theme, dark blue= negative, light blue= positive, green = psychosocial risk factor, grey = outcome, arrow = "leads to".

Figure 5. Thematic map integrated into context of return-to-work or work disability.

4.6.2.1. Worker health or company wealth?

Worker health or company wealth examined the effects that workplace systems had on the provision of WS and is supported by the following sub-themes;

-Systems designed with worker needs in mind

-Worker needs overlooked

-Problems with accommodating intense work

-The limits of support

Systems designed with worker needs in mind

In two of the participants' experiences, it was described that the workplace took great care of their worker. In these cases, the workplace was shown to make decisions that were based upon ensuring that the worker's needs were met. This person-centred approach is described in Kiwiguy's words below;

> *… [company] themselves, they have a really good work system umm, nothing is too much trouble it seems, to get you back, to help you, to do whatever you like, you know they're open to all sorts, it was quite amazing umm.. – Kiwiguy.*

A reason given as to why this may have been the case in Kiwiguy's opinion was because the company he worked for were large enough to move away from ACC and instead engage with third party insurers. In doing so, the company was able to create their own system with their own rules;

> *It's just a great system.. because they cover their own [insurance provider] costs, they are really tough on injuries within the workplace. - Kiwiguy*

In the direct experience of Kiwiguy, actions such as how the management thoroughly engaged with the occupational therapist (OT) at the workplace meeting, or how the workplace were known to go out of their way to help were given as examples of how the worker's needs were put first in his workplace;

… and it took, actually it was about an hour I think, I was actually quite good I think [OT], [OT] and [manager] were both surprised how much time had passed just, working through things and discussing and things.. -Kiwiguy

… in the last three years from what I've seen.. or who has come back, they've just gone out of their way to make sure that everything is fine. -Kiwiguy

In contrast to the large organisational presence in Kiwiguy's workplace, Phil's workplace was fairly small and there appeared to be a lack of managerial presence onsite upon his return. However, this did not seem to bother Phil, nor did it appear to prevent his needs being met. Workplace actions such as getting a short-term contractor in to reduce his workload upon his return, paired with having been given the authority to seek the assistance of other workers, created a stress-free environment where he could work at his own pace, without pressure;

… as soon as I heard they were getting a contractor in said "thank god for that" cos' you know that was my biggest worry is you know… it's just left you know.. "oh my god", you know, you're gonna need another holiday after your first week back (laughs). - Phil

I'm sort of just gonna' play with the weed eater as we go cos' a lot of it's very steep stuff so I don't know how I'm gonna' go on there with a shoddy leg.. but apart from that I'll be a little bit slower than I was sort of thing (laughs) so yeah. – Phil

Kiwiguy expressed a freedom in being able to almost choose the way one would prefer to return into the workplace, and referenced the size of the company in relation to their flexibility in being able to offer a worker "options" within the RTW process;

… [electrical department] are good, good to try and get into, mainly because they've got, virtually nothing heavy.. electrical, that'd be a good one to come back into, to get back to work… umm if I want a change, I'll apply to go to [other large department] they're basically always looking for people cos' it's so big.. because it takes in from the gardening, all the plants right down to lawn mowers. - Kiwiguy

In the above passages, these participants described that the systems they were entering back into made decisions based around their needs as they engaged in their RTW programmes. In addition to "visible" acts of support, when questioned further about the factors that facilitated his RTW transition, Phil also referenced softer, more implicit acts of support from the workplace;

… it was just that umm willingness from work you know, you knew they were there sort of thing, that if you need help, sort of like I said to [manager] and that sort of thing.. "OK, they are concerned" you know.. and yeah.. - Phil

Furthermore, some participants noted aspects of their workplaces that were not only designed to support them during their injuries, but generally cultivated an overall culture of support. This kind of support was described in terms of co-workers going "out of their way" and assistance being given without hesitation, as though it is part of the job description itself, as captured within Kiwiguy's comment "your work is to help";

<u>Interviewer:</u> … why is your environment.. why can they provide such a nice?..

<u>Kiwiguy:</u> I'm not quite sure why, they seem, but they seem to go out of their way. Your work is to help, if they see your str..

having problems or anything, they'll say "you alright? You want help? You OK?"..

Phil provided a similar description of the supportive culture in his workplace;

Phil: … anything sort of that's always been too heavy, it's always yell out to somebody, you know..

Interviewer: Yeah..

Phil: "I can't do this by myself", it's quite obvious you know..

These experiences have several similarities with study one, especially with what was discussed by Lysaght and Larmour-Trode (2008) in terms of cultivating a "culture of support" and the positive effects they had on workers. Although these WS were experienced within interactions between workers and co-workers, it has been reported that organisations may set the stage for a supportive workplace culture as indicated by Lysaght and Larmour-Trode, (2008) and Kosny et al. (2013).

Quite a different set of experiences were described by the other participants. The workplace systems these participants described appeared to be less focussed on providing for the needs of the worker, opting instead to focus on other "priorities". It also seemed that these participants may have been less sheltered from workplace pressures during recovery. Their experiences are described in the following passages.

Worker needs overlooked

In some cases, WS may have been improperly delivered or hindered by a workplace's orientation towards turning a profit rather than supporting the needs of the worker. Despite Jeff's OT making a plan emphasising the need for Jeff to participate in workplace-based rehabilitation, the proposed RTW plan was flatly rejected by his employers;

… umm undergoing rehabilitation but my management is pretty much blocking me from actually going.. umm there was a plan

that was put in place.. and my manager is pretty much just a wall that stops the plan from happening. -Jeff

Rayne shared a story about how she was injured to illustrate the feeling that her needs may not have been the company's priority. In her view, getting the job done was paramount, however this may have influenced why she injured herself in the first place;

I shouldn't have been doing that at the same time, but when a job has to get done, it has to get done. -Rayne

Rayne: Cos' sometimes I did think it was too much for me.. umm and I still pushed myself to do it..

Interviewer: Yeah?

Rayne: There's no.. (pause).. time is money..

Another participant, Jeff, also made reference to his employer's financial interests, potentially at the expense of the worker;

… yeah and they're constantly saying that they lose money if we don't get a job done fast enough -Jeff

Jeff also described that his workplace's growing size and financial interests may have played a part in why his RTW programme was problematic;

Interviewer: Do you think it's them just being bad people or they've been made this way by the industry or the pressure that they've…

Jeff: I think that they've actually forgotten umm that they've actually.. everything's just gone out the window as the company has gotten bigger, because it started off small and now it's just grown and I think that also has something to play

with cos' they can't constantly look out for everyone and it's just shit.

It was also noted by participants that such priorities may have led to genuinely unsafe work practices. Jeff in particular identified that his experience of frequently being in danger on the worksite led to feelings that worker health and safety was not of great importance in his workplace;

… there's been other incidents with powerlines and umm it's been touching our scaffold and we're on the scaffold, not realising that it's touching it, we could all die any second and umm we all argued the point [in a work meeting] but it just kind of goes over their heads. - Jeff

… they just don't seem to actually care, you could probably die and they'd just be like "oh great there's a lawsuit coming our way". -Jeff

… there's been so many near deaths, my [colleague] almost died.. umm a powerline, and my manager joked and said umm "oh well we can't lose you, you're worth about a million dollars, so we'd have to pay [colleague's family] a million dollars" (laughs).. [colleague's family] wanted to come in and kill them.. because no amount of money could compare to someone's life -Jeff

As a further, indirect consequence of some workplaces' apparent orientation to profits, another issue materialised in the form of pressure. According to Rayne, pressure to return to full duties was described as having a negative effect on her;

… umm so there has been a little bit of pressure of when I'm going to be returning back to full time… - Rayne

… so I'm not sure if they're happy about it, mainly because I've been asked several times "when are you going to be returning back to full time?" "when do you think you can come back to your old role?" umm.. yeah there's just been questions, kind of like that in the air. -Rayne

Rayne noted that such questions amounted to pressure and at one stage, she reported that she nearly succumbed to it if it weren't for her doctor's hard line on the issue;

… we're talking managerial is where I'm getting the questions, and I, I personally feel like it's pressure. -Rayne

… so ahh the last time I went to go and see my [treating doctor] I did ask "can I go back to full time?" Not because I was ready but because work needs me. Umm and she just flat out said "no". -Rayne

Jeff reported that pressure from the workplace conflicted with his efforts to recover after his injury;

... off work in my first week they were just ruthless, like constantly at me, texting me, calling me, but aggressive about it, "when are you coming back?" .. blah blah blah saying heaps of stuff like "you need to come back, you need to get better".. like I'm trying but you're not giving me the time. -Jeff

Upon returning to the workplace with a graduated RTW proposition in hand, Jeff experienced further pressure to "cave in" to the workplace's plans for him.

… my manager would refuse to put that plan in place. And he was adamant that I wasn't there to be rehabilitated, I was there to work. - Jeff

Jeff went on to describe other features in his workplace such as competition and favouritism which may have promoted actions that benefitted the company, rather than the worker;

… there is there's a lot of favouritism umm the manager's [colleagues] are definitely favoured over the rest umm. - Jeff

… there's a guy who broke his ankle, turned up to work the next day and was walking around, trying to make out he was ok because he wanted to still be known as one of the best ones. - Jeff

… everything is competition they are like, so umm with my injury like, even when I was first injured I would carry two planks.. people would come up and carry three, the next one would carry four, it was a constant competition. -Jeff

These passages served to illustrate the idea that there were contrasting experiences described by the participants in relation to the workplace systems they returned back into. Again, these findings had several parallels with what was reported within "systemic issues" in study one, especially with regards to WS decisions being influenced by financial considerations (MacEachen et al., 2010) and issues such as competition and unsafe work practices (Kosny et al., (2013). It is put forward that systems where WS were provided differently were at times underwritten by differing views on the importance of considering workers' needs.

The nature of the participants' working roles are described in the next sub-theme "problems with accommodating intense work".

Problems with accommodating intense work

All participants within study two reported having physically intense roles. This may have had a bearing on the overall workplace environments they were returning back into;

… in this environment here? Umm it's pretty intense, I've gotta say ever since I started working here it's been.. crazy and intense it's just been "go, go, go" non-stop. - Rayne

… pretty physical, it's umm physical every day umm there's never a moment where it isn't umm I think we carry 3 tonnes of steel a day. - Jeff

John even used the physicality of his role as a measure, in order to share his perceived current functional capacity since suffering his injury.

… obviously it's stinking hot, heavy work or something I probably just won't last a day at the moment, yeah, I'd be out to it. - John

Furthermore, the physical roles described by the participants, tended to lead to bureaucratic problems in the participants' reports. John stated that his workplace would not support workplace accommodations such as modified work due to the logistical issues it would cause, and for fear that they may be held accountable if he were to re-aggravate his back on-site;

I have spoken to them like two weeks, three weeks off the bat and they just said that they don't do light duties at work because they feel as though they get hammered if something else gets twinged at work, if the injury's still there and.. then they've got to try and find you special work so it's not actually your job title, you're not actually doing what your contract says you're doing. -John

Another finding with regards to WS from a systemic perspective, was that a company's "duty of care" for a worker appeared to be "conditional' on certain factors. For example, in Kiwiguy's opinion, the provision of WS at his workplace appeared to have no limits with regards to how or where the injury occurred;

… anything that happens within the workplace, or without, it seems you don't get treated any differently whether you've done it in the workplace or without yeah they're fully 100% behind. - Kiwiguy

However, in John's case he linked the fact that his injury was not work-related as a contributing factor to why his workplace could not fully support him. John went on to state that if he had sustained his injury at work, his workplace would have been obliged to support him, and insinuated that there may be bureaucratic consequences if they did not comply with such obligations;

John: Because it didn't happen at work, they don't really care so much.

Interviewer: OK.

John: Cos' it happened at home, didn't happen at work like a workplace incident, things like that.. not the rush probably or the help as well, to get you back to work a bit quicker.. if it happened at work doing something, there would have been an investigation, things like that.. they want to get you back to work as quick as possible, even if you were doing something different because there's a day's lost to injury, time lost yeah injuries, things like that so..

In workplaces where physical work was performed, issues experienced with not being able to offer WS such as "light duties" were influenced by other factors. Some reasons given for why a company cannot offer modified duties may seem fair. However, the reasons given in the above passages indicate that other issues played a part. Bureaucratic issues such as WS being conditional on the type of injury, workplace concerns about being held liable if a worker is re-injured or performs tasks outside of their contract may need to be addressed, especially if they threaten the provision of WS.

In summary, the systems within the workplaces that participants described tended to differ in terms of how they responded to workplace injuries, and in the overall environments they reflected. Through the participants' descriptions, the workplaces' views of worker needs were pivotal in the provision of WS. Furthermore, it was identified that workers who return to physically intense roles may not receive work-supportive offers for reasons that were not solely logistical. Instead, bureaucratic issues may have further discouraged workplaces from providing WS. In addressing the gap identified within study one, these described findings dug deeper into systemic issues. Further issues such as hesitation from workplaces to provide WS owing to bureaucratic issues involved with heavy work were identified. Other findings described drew parallels with study one and were found to have a significant bearing on the provision WS in study two.

Please note that bureaucratic considerations relating to the medical/ insurance providers will be discussed in a later theme "is standard care sub-standard?"

The theme "worker health or company wealth?" also shared several links with the next theme presented; "trust underpins WS" which addresses the question "*can trust influence WS, and in turn RTW outcome?".* These links will be further discussed in 4.7.- "discussion".

4.6.2.2. Trust underpins workplace supports

The following presentation of this theme is supported with the use of the following sub-themes. A "midpoint" summary serves as a discussion checkpoint before the further findings are presented.

-Bonds of trust

-Accepting the veracity of the injury

-Trust through worker value

Midpoint summary.

-*Expectations precede injury*

-Worker-employer concurrence

-Injuries misunderstood by the workplace

Bonds of trust

Bonds of trust referred to instances where a deep, mutual and sometimes implicit understanding between the worker and the workplace had formed. In some participants' descriptions, it was evident that trust had been built over time. Trust was also reported to have effects on how WS were offered;

> *Interviewer: when did you make contact with each other again after the, the actual accident?*
>
> *Phil: Umm oh pretty much straight away, as soon as I saw the doctor I rung them and said "I'm off work".*

This demonstration of open, honest and immediate contact may have been driven by Phil's respect for his employers. In other comments, Phil described his interactions with his employers in almost a "neighbourly" way. The bond he had developed with his employers gave the impression that they could "help each other out" or come to an agreement with a handshake, rather than a contract;

> *… ah well they're obviously ticking over and you know I mean they knew to give me a call if they got in the crap sort of thing a few times so yeah.. -Phil*

Furthermore, Phil described bonds with his co-workers that extended outside of the workplace. There were no issues with maintaining these bonds during his convalescence;

Yeah we get along alright, we'll have the occasional couple of beers after work, that sort of thing… you know, I'd still see [manager] sort of in town or [co-worker] in town and that sort of thing I mean [co-worker] came around home a few times and things.. you know kept in touch with the place sort of thing. - Phil

with the staff, it was the "how are you getting along?" and you know, and "hurry back" (laughs) "we're missing ya".. - Phil

Kiwiguy reported similar bonds within his workplace environment;

I don't go in often, like once a week really, at the moment, and people, everybody's going "how are you, how are you how are you" it's all very jovial and everything. - Kiwiguy

Although in Kiwiguy's mind, going in once a week was not considered "often", one might argue that this was very frequent contact. Kiwiguy also described contact outside of the workplace and that he and his co-workers shared a very similar sense of humour;

… [co-worker] was on the door, he's always a character, he said "oh, have you injured yourself then? (laughs) things like that so.. it's like a good , it's like a bigger family cos' my family's pretty tiny anyway. And everybody jokes.. I said ahh it's alright, it's my leg.. because I usually drive him home, he doesn't have a car so when I'm working we finish at the same time, so I take him home. -Kiwiguy

… god' I went up there for a few minutes, it took me an hour and a half to get out of there the other day cos' everybody's going "how are you? What's up" rah-dee-rah. -Kiwiguy

In contrast, John denied having many connections with co-workers outside of the workplace due to his co-workers' having family commitments;

Interviewer: Have any of your co-workers that you know real well and they know what it's like?

John: Uhh a couple, yeah but nah, very rarely, not really, not many of them come around, umm because they, I guess they're all busy, they're going home to their families straight after work.. haven't had that interaction.

In Jeff's case, he reported that the few bonds he did have had an effect on his feelings of safety in an overall negative workplace environment;

… there's been three guys that have actually called me to make sure I was ok, talked to me about it, like when I'll be coming back and stuff like that… they ended up being the ones that I could actually click with and umm would actually, I would be able to hop on the scaffold and feel safe rather than hop on one and feel in danger the whole time. - Jeff

Rayne also described bonds with her co-workers despite these bonds being strained at times by systemic pressures introduced within the previous theme;

… at work? I've gotta say that they've always been nothing but pretty good, umm friend wise.. definitely supportive, umm work wise.. supportive partly umm but that's only because they've got added pressure as well.. umm but the support has always been there with my work friends.. yeah since day one. -Rayne

These bonds allowed the participants to feel more confident, safe and supported when returning to their workplaces and mirrored some of findings from study one, and the previous theme, "worker health or company wealth?".

Accepting the veracity of the injury

In other cases, bonds of trust were less evident especially when participants reported that the veracity of their injuries may have been questioned either explicitly, or through picking up vibes in with workplace environment. Such "questions" are at times roused by suspicions from those within the workplace that workers may use injuries as a reason to make themselves exempt from aspects of their usual working role as highlighted in study one (Kosny et al. 2013). In Jeff's experience, his employers did not believe that the injury he had sustained was legitimate, subsequently they chose not to support him;

… my manager umm he's been blocking me from pretty much going back to work for rehabilitation and so umm, its been pretty stressful.…. He doesn't believe that I should have a sore back because I'm young, that's his idea umm.- Jeff

An immediate result of this was that Jeff experienced resoundingly negative support and all pathways back into the workplace, including those organised by Jeff's OT, were blocked by the workplace. Rayne noticed upon returning to the workplace after her injury, that she sensed "vibes" in her working environment;

Interviewer: Any other vibes or things in the air?

Rayne: To be honest, yeah absolutely.. you can pick up negative vibes left, right, well I know I can.. left, right and centre.

Furthermore, as a result of suffering her injury, Rayne reportedly went from being a trusted colleague, to an outsider within her work circles;

I was kind of the one who wanted to know what was going on with everything umm you know how things were ticking on and when I kind of asked the questions, you know "who's doing this, who's doing that now?" you know cos' I'm wanting to keep myself updated, it's kind of like, "oh well you don't really need

to know that kind of stuff, you're only here part time, so you know, it's not really relevant to you. – Rayne

Rayne's colleagues seemed impervious to her efforts to fit back into the working environment, which led to her questioning the reasons behind their actions. Overall, Rayne was left frustrated and isolated;

… it's like "ohh come on guys, I'm here, you know I've got my hands up I'm ready and waiting and asking all the questions that I possibly can like I used to", you know, the attitude of me wanting to be here and work like I used to.. you know "I still, I'm still here" (laughs) yeah. – Rayne

… that vibe kind of makes me feel a little bit left out, only because you know I'm getting, the "well you're not really here full- time so you don't need to know".. -Rayne

It can only be speculated whether Rayne's colleagues questioned the veracity of her injury. However, in other participants' cases, certain factors were reported to have a bearing on the workplace accepting or confirming the injury. In some cases, the legitimacy of the injury may have been accepted by the workplace according to the mechanism of injury.

… yeah, umm basically I was assaulted, assaulted at the umm.. the [social establishment]- Phil

Interestingly, Phil vehemently denied any need to validate his injuries to his colleagues, presumably because of the brutal and random nature of the incident that caused them. However, in cases where the injury was relatively innocuous or linked to something that could arguably have been avoided, trust and support were withheld. To clearly illustrate this, Jeff insisted that if he had suffered his injury in a more serious or dramatic way, as

opposed to hurting his back whilst picking up a piece of scaffolding, he would have undoubtedly received better support from his workplace;

I know for a fact that if I was hit by a bus, people would be like "oh no, like that's bad" and my manager would probably care.. but because it's been at work, that's a completely different ball game and he's just like "not my fault, you should have been careful". - Jeff

Additionally, a need to confirm the veracity of their injuries was described by several participants' reports of performing actions which enabled their workplace to "see" their injuries through their incapacity. Such actions were thought to have influenced trust, and therefore how WS were provided;

I was still, you know my back wasn't straight and they had seen I was a snail out there, yeah. They knew how I, they all knew what I was like and that I was still injured. – Rayne

Kiwiguy described that his actions were modelled from a "toughen up" type attitude that he linked to a New Zealand societal viewpoint;

… umm well I did my usual, the New Zealand type thing is I bandaged it up and went to work.. – Kiwiguy

Regardless of motive, presenting to the workplace with a bandaged knee would have presumably allowed others in the workplace to accept his injury. In supporting this statement, Kiwiguy later stated;

<u>Interviewer:</u> … they maybe asked you to validate your injury or?

<u>Kiwiguy:</u> No…none of that, none of that, nobody's got their nose in a twist and things like that so, I a lot of them cos' when the accident happened I did go back to work for a day or two, and they saw me limping and getting worse and worse anyway.

In justifying why nobody had got their "nose in a twist" about his injury, Kiwiguy once again made reference to limping around the workplace in clear view of co-workers. In such cases where the mechanism of injury may have been less "believable", some participants employed further strategies to "earn the trust" of the workplace. This next passage begins with a description of John's injury in his words;

I walked in the entranceway, onto the lino uhh wearing these sandals that I've got and uhh sort of just slipped one foot, skidded forward yeah. And felt umm.. felt something go in my back, and because I was a little intoxicated (laughs) I just sort of stayed standing up for a while. – John

In analysing Johns' story, earning the trust of his employers required careful planning, and changes to habitual behaviours. Throughout his injury, John was on constant alert and even refrained from going on holiday with his family in order to ensure that the veracity of his injury would not be questioned;

… yeah day trips was about it, but even then I'll feel like I have to be careful about saying anything like that cos "oh well, you shouldn't be, if you're well enough to go there, go do that then".. even though you might be going to, like I've taken the kids for a walk to [local park] things like that, you know.. just you've got to be careful what you do say, you know you've been pro-active in helping yourself by going for a walk, it could

be put in "oh he's just galavanting around doing shit and.."

yeah. -John

John likely took these steps to ensure that he would maintain the support from his workplace. John's efforts also included calculated actions such as "showing face";

I umm would go in there on a Monday morning if I could, depending on whether I had had that many tramadols or whatever in the night and you know, whether I could actually drive umm.. just to show face and things like that still, yeah to show that I'm keen on getting back there anyway, yeah.. -John

Efforts also included "not showing face" depending on the social occasion;

I haven't wanted to go down there on a Friday, last Friday of the month or something and drink beer down there, even though I could, because well, yeah you'd be opening yourself up to.. well they've worked all week to earn that beer and I'm just.. go show up down there and drink it and.. yeah so I sort of been mindful of that sort of a thing.. yeah. -John

John would even deflect the conversation away from himself when he saw co-workers in public;

… yeah, more interested in what they're up to cos' yeah cos' you get the feeling that they might think that you're just milking it and cruising and doing nothing.. yeah. (pause).. but really you're doing nothing and getting paid accordingly to it.. yeah. -John

Throughout, John was very mindful about how the workplace may have perceived his actions in various situations and described it as a very delicate balancing act;

… so that's why I do show my face down there, show them that I'm still interested it working but yeah keep out of their hair as well at the same time.. -John

These findings add further layers to what was described in study one, adding that factors such as how the injury happened may shape trust, and detailing the extent that some participants went to in order to legitimise their injuries.

The concept of "time" was also described as a factor that was highlighted to jeopardise trust that had previously been "accepted" within workplace interactions. Rayne in particular reported findings similar to what Wrapson and Mewse (2011) presented. In Rayne's experience, the provision of WS were reported to change over time. It was argued that her workplace's "acceptance" of her injury showed signs of strain in relation to the time her injury took to heal;

Rayne: … so at the time they were all for my recovery, umm all they were focussed on was getting me better. Umm, and telling me, "you do what you've gotta do" umm and "just focus on getting, getting better for yourself" umm yeah that was at the time..

Interviewer: Tell me now about the maybe the transition or the change..

Rayne: Umm ok so the attitude I would say has changed.. so from being very supportive to I would say.. uhh.. less supportive now.. (laughs)

However, Rayne stated that she could see the workplace's point of view;

… that's another thing why I get from their perspective, you know, they were probably thinking the same thing as me, you know "it's been long enough now, it's about time you umm, got back on that 50 hour mark" yeah.. -Rayne.

It appeared that both Rayne and her workplace may have under-estimated how long her back injury would take to heal. However, it was insinuated that the workplace may have got to a stage where they believed that Rayne had "out-stayed her welcome" with regards to the relatively cushy light duties and reduced hours role she had been placed in.

Trust through worker value

Another factor which was identified to influence trust, and in turn the provision of WS, was the value a participant held with regards to their role. John reported that his skills and experience as a foreman, rather than just a "chippie" (builder) within his company acted in his favour during the RTW process;

… yeah so, yeah definitely.. like not just a chippie and so it makes me a little bit, a little bit let's say indisposable as such. Everyone's disposable but I'm more of an asset anyway. -John

Given John's experiences in the industry he then further supported this statement;

Interviewer: … yes, you would say that ahh, if you didn't have those skills..

John: yup, and you're just a dime-a- dozen builder yeah, they could just flick you off yep, yep.

Similarly, Phil noted that the uniqueness of his role as a handyman within his workplace made him feel secure during RTW processes;

… nobody else knows what I can do or, can sort of do it so..

(laughs)- Phil

In contrast Jeff expressed that his relative inexperience definitely did not work in his favour;

… it will be pretty easy to be like, "yeah we don't need you" like "you're not going to get better" kind of thing.. if he needed to get rid of someone it would definitely be my head on the chopping block. -Jeff

In this sub-theme trust was described from the perspective of the worker, in that they are trusting the workplace, rather than the workplace demonstrating trust in the worker. It remains to be seen whether such trust through value could be reciprocated by the workplace in that they may offer better WS to their "prized" workers. These findings expand upon what was brought to light within study one.

Midpoint summary.

In the above sections, trust was shown to be influenced by the perceived value participants held in relation to their workplaces and was reported to strain over time. Furthermore, the need for participants to confirm the veracity of the injuries they had sustained was argued to be driven by efforts to gain the trust of the workplace. From visible gestures demonstrating their incapacity to the workplace, to more elaborate actions to earn trust such as in John's case, trust is then considered to be contingent on the workplace confirming a worker's injury. As a result, the provision of WS may be at the

mercy of the workers' successes with regards to winning the trust of their workplaces. The presentation of "trust underpins WS" continues below.

Expectations precede injury

Within the interview, it was made very clear by Kiwiguy, that he had a pre-existing positive impression of the health and safety practices at his company. When contemplating this concept in light of my own past-experiences, for example in relation to clients' having pre-existing opinions of ACC, as discussed in chapter 2.2.2. "researcher interview", the question of whether Kiwiguy's pre-existing opinion of his workplace's reputable practices may have influenced his expectations of WS was considered;

> *I've got nothing but good things to say from what's been happening with my injury through them [health and safety team] so far, I haven't got back to work yet… but from what everybody has in the past that I've, in the last three years who I've seen who has come back they've just gone out of their way to make sure that everything is fine. – Kiwiguy*

> *… but no the return to work is brilliant, umm for my part of it so far. I'll let you know a bit later on once I.. [return to work] (laughs).*

As a result, Kiwiguy had an opinion the RTW programme at his workplace despite having not yet made a successful RTW himself;

> *I think they are very well set up for getting people back in and helping. -Kiwiguy*

On the contrary, poor health and safety related practices relating to the financially orientated workplace systems described in the previous theme may equally have affected Jeff's perception of WS. The mechanism by which this claim is put forward is

that laying trust in employers during RTW processes may be influenced by what a worker has seen or experienced in the past;

> *… these guys don't even have the height and safety training. There's just thrown into the deep end and told to get up that scaffold.. but it's like umm if [safety assessment agency] was to come along, they're all practically screwed.. I've never seen anything like it ever.. but it's just crazy how they claim to be all about health and safety yet there's not one bit of health and safety involved.. apart from your hard hat that's given to you on day dot. -Jeff*

From Jeff's comments, it is argued that such a workplace environment may not be "ideal" for developing trust in your employers should you experience an injury. This concept had not previously been identified within study one and offers a new angle on trust.

Worker-employer concurrence

Another interesting factor was identified through analysing the participants' experiences within this theme. Situations where the participants and the workplace were in agreement with one another with regards to WS negotiations, appeared to lead to mutual trust. An assumption I had coming into study two, was that positive WS related to efforts to enhance RTW, and negative WS hindered RTW. It came as a surprise then, that some participants interpreted WS more positively when they and the workplace were in concurrence with regards to their opinion of whether they should RTW or not, even if that opinion was to *not* support RTW. This scenario was first identified in Kiwiguy's case, when he supported his workplace's rejection of an unsuitable "light duties" medical certificate that had been issued by his doctor;

> *… also the fact that my leg just gives way (laughs) and which is not safe..(pause).. not safe at all. and umm so [organisation] came to the conclusion that.. do not go until they figure out*

what the hell it is and what they can fix.. and what they can do to fix it. -Kiwiguy

The way in which Kiwiguy paused repeated that the proposition to RTW was "not safe" gave a clear signal that he agreed with his managers' decision, and also gave the impression that his workplace were "looking out" for him. John expressed a feeling of relief when his employers mirrored his exact thoughts during a workplace meeting;

… [manager] pretty much just said the same thing "oh shouldn't we wait until the MRI is done, you know, because I don't really want him back at work if, he's got a fractured something, and could be doing something and then twinges it.." (pause).. yeah that's quite good how they said that as well. - John

On the other hand, Jeff contemplated the consequences of his decision to openly disagree with the workplace at a meeting. In Jeff's view, speaking out against the unsafe policies at his workplace may have jeopardised his already precarious position. As a result, this may have contributed towards difficult RTW situation that developed;

I complained majorly and I think that's also has a part to play in why I'm not liked -Jeff

In referencing another study which discussed disagreements in the workplace, managers were also reported use their positions of authority to force other co-workers to actively dis-engage with injured workers (Kosny et al., 2013). The notion that co-workers were in many cases forced to comply for fear that they themselves may be punished if seen to actively resist the "discourse of abuse" was presented (Kosny et al., 2013). There was an uncanny resemblance between findings of this study and Jeff's experiences;

… either got people against you or, maybe a couple with you but there's always more against you so it's always really difficult.. umm when I came back on Monday this week, everyone was quite cold…[manager] is the one that has the most power.. and the others just kind of shunned me.- Jeff

The formation of trust was shown to be influenced by having a pre-existing expectation of workplace policies, and worker-employer concurrence. Furthermore, in response to WS situations where worker and employer where in disagreement, it was highlighted that an employer can use their authority to further disadvantage the worker. A final sub-theme offers another perspective on why trust may have not been formed so easily in workplace scenarios.

Injuries misunderstood by the workplace

In several cases, the participants believed that they felt misunderstood by the workplace. Rayne shared an opinion that because not many people in her work environment had sustained an injury like she had, they simply didn't understand what it was like for her.

> *… I'm sure they don't understand, cos' they've never dealt with an injured person at work before and haven't dealt with the processes or anything like that, or even the personal experience. – Rayne*

John had an interesting perspective on being misunderstood, sharing an opinion that resembled the adage "the grass is always greener on the other side". In taking this perspective, it was insinuated that his co-workers were oblivious to the hidden issues injuries cause, and instead mistake injuries for opportunities to "take a break" from the stresses of the workplace. In reality, the situations John and Rayne found themselves in after sustaining their injuries were extremely stressful and totally undesirable. But the hidden nature of these challenges were difficult to communicate with co-workers;

> *… I was like "f*** I can't wait to get back to work" and he was like "ohh nah I wouldn't be, f*** this" you know cos' it's hot and sweaty and things". -John*

In further supporting the idea that the challenges an injury poses may be hidden from the view of others, Rayne admitted that she too would probably not have been supportive had it not been for the fact that she herself sustained an injury;

… from my own point of view, is if I was fit and well, and someone at, and that happened to someone here at work, hands down I wouldn't have, I wouldn't be that supportive, I would in some cases but in other cases I wouldn't, and that's just being completely honest.- Rayne

In such scenarios, one can only imagine how difficult it must be for workers to deal with the effects of an injury whilst also sensing that colleagues have taken them for a fraud or similar. The hidden effects of injuries may then contribute to providing an explanation for why communication between workers and workplace parties were shown to break down in some scenarios within study one and study two.

The sections presented above share links with some of the systemic issues discussed under the "worker health or company wealth?" theme, in that the overall system may also play a part in the provision or withdrawal of WS. This was discussed in terms of the reputation of the workplace in terms of health and safety policies and also the ability of upper management to have influence over co-workers, which was highlighted during the worker- employer concurrence section. These findings then suggest that trust is implicated within these systemic processes. In any case, scenarios where an injured worker and the workplace are at "odds" with one another during RTW- related processes, may provide opportunities for VR intervention, in the name of WD prevention.

In addition, bonds of trust, a worker's value, and various efforts to answer workplace "questions" about the veracity of their injuries were presented in relation to how they underpin WS in the beginning of this theme.

The next question "*can RTW-Ex be influenced by WS?"* is addressed by the standalone theme "WS move my goal" introduced below.

4.6.2.3. Workplace supports move my goal

Although somewhat tenuous, there is certainly room to argue even at this point that the factors surrounding WS identified in the previous themes were shown to have the ability to influence workers' RTW-Ex. Within this theme however, some relatively more "concrete" examples where participants reported that aspects of WS were shown to have direct bearing on their RTW-Ex are provided.

In Phil's experience at least, it could be argued that the WS implemented had a bearing on his RTW-Ex. In this case, his workplace's orientation towards accommodating his needs was reported to help erase any worries he had regarding the challenges he would face upon his return to the workplace;

> *Interviewer: … the pacing, the coping with the challenges, have you got any umm.. any worries about that in the next wee while?*
>
> *Phil: No [manager] has already offered, they've a couple of umm casuals from the [work area], so she's already offered so if I need any help around the place, just give her a bell and she'll sort me one of those.*

Presumably, when a worker calculates their RTW-Ex, they may take into account the characteristics of the role they are returning to. The WS described in this quote demonstrated that Phil's employers influenced his RTW-Ex artificially by "shifting the goal-posts", or in other words, by making his RTW goal considerably more achievable. However, as brought up in the discussion of study one, the effects of returning to the workplace may "organically" influence full duty RTW-Ex. As an example, the workplace may act as a more tangible benchmark to form "realistic" RTW from, or arguably provide a less deleterious environment than being stuck at home. Furthermore, considering that several developed countries have already adopted "early RTW" management

programmes in response their positive influence on RTW outcome (Tjulin et al., 2011), similar strategies may too influence RTW-Ex.

In contrast, Jeff established a link between WS and his declining RTW-Ex. The actions of his manager during his RTW were perceived as barriers to RTW, and in Jeff's mind, pushed the prospect of RTW further away from his grasp.

Interviewer: … do you think that's [manager's actions] had an effect on your ability to achieve your [RTW] goal?

Jeff: It has, my goal seems to be getting further and further away because there's more and more barriers that keep popping up…

Furthermore, in response to seeing his efforts to construct a suitable RTW plan be swiftly rejected by his manager, Jeff's ability to stay resilient in the situation appeared to waiver;

Interviewer: … what's that done to your willingness, once that's happened?

Jeff: It kind of just went out the window because I was offering to work without pay to be rehabilitated because I knew they wouldn't pay me that 20% anyway so I was like I'll do it to prove myself that I am eager to get back, but then to be blocked constantly.. it's just made me feel like, well I may as well give up.. because I've tried multiple different things and it just doesn't seem to work.

Rayne too offered an insight which, when considering the effects of feeling like an "outsider", described in the previous theme, indicated just how important being understood and "included" was to Rayne's RTW-Ex.;

… but yeah no it's all I want is to be kept in the loop and I will get better to come back full time. – Rayne

In this section, both direct and indirect WS were reported to influence RTW-Ex. The provision of modified work by reducing workload are considered “physical” acts which directly assisted participants such as Phil in seeing a clearer path back into the workplace. On the other hand, intangible WS actions such as being included in workplace discussions were also highlighted to influence RTW-Ex. In Jeff’s case, it could be argued that having a WS offer rejected affected his RTW-Ex directly and indirectly. Learning that he would not be returning to work as he had hoped would have a direct and tangible effect on his expectations for doing so. However, an indirect consequence for RTW-Ex may have been that Jeff’s ability to stay resilient also appeared to suffer as a result of the rejection.

The next theme “is standard care sub-standard?” addresses the question *“can RTW-Ex be influenced by medical and insurance providers?”*

4.6.2.4. Is standard care sub-standard?

Before delving into this theme, some justification for the modification of its informing question is given.

Prior to commencing study two, I conceptualised “medical providers” as doctors within primary care. The “medical providers” question was developed through the findings of study one that identified parties such as treating doctors as possibly having an influence on RTW-Ex. However, the participants of study two interpreted a much wider conceptualisation of “medical provider”. In their realities, VR providers, such as their OT and even the insurance providers that employed the OT were described as though they were part of the medical team. For this reason, the research question carried over from study one was modified to incorporate all medical and insurance providers.

The following sub-themes are used to best illustrate this theme;

-One size fits all or made to measure?

-Communication connects the dots

-The power of professionalism

One size fits all or made to measure?

Within this sub-theme, bureaucracy featured again, in illustrating the effects that bureaucracy, this time insurance providers, had on the RTW-Ex of the participants within this study. These bureaucratic issues shared a tendency to not be tailored to the needs of the participant. Rather, they were considered to be a part of the "one size fits all" category.

This sub-theme is further supported by similar examples of "one size fits all" approaches from differing perspectives such medical providers, and by providing contrasting scenarios where medical or insurance provider actions were "made to measure".

After waiting weeks to be contacted after sustaining his injury, it appeared that John had simply slipped through the cracks of the system that was designed to support him. This was especially tough for John, as his wife and children were dependent upon his support;

> *… it was three weeks before I thought "well, what do I do with myself here?" I hadn't heard from [insurance provider].- John*

> *… so the odd day, yeah not very good really.. can put a lot of strain on things.. lack of money to pay for all the bills and things like that as well puts stress on and yeah, nah it hasn't been very good. – John*

Unfortunately, John wasn't alone. Jeff too reported having a similar problem with the insurance provider after suffering his injury;

> *… they told me someone would get in touch with me but no one ever did. So then I called and they finally assigned a case manager. -Jeff*

After struggling to deal with the issues he was facing at his workplace, along with how he had been treated by his insurance provider in the early stages after his injury. Jeff later reported that an administrative error on the insurance provider's part took him past breaking point;

> *… yesterday I finally broke, and umm sat on the deck and just bawled my eyes out because I was just over it I was like "I can't do anything". It was, the final straw was [insurance provider] umm they paid me, I think $150 and they never sent a letter or an email stating that they were going to lower the payments so I couldn't prepare myself for when it came to bills, so my bills went out, I got put into overdraft, and I was just sitting there like "great". - Jeff*

In both cases, the vulnerable situations these participants found themselves in were certainly not improved by their insurance providers' actions. It was more likely that these issues including delayed response times and administrative errors added to the problems they were facing. However, these initial problems appeared to be the "tip of the iceberg".

After insurance provider support finally kicked in, John felt the advice given did not apply to his situation and once again momentum ground to a halt;

> *… yeah just got the normal package from [insurance provider] so yeah "don't tackle back pain lying down", "go for walks, do this do that, keep up to your normal job" and that but I mean, f***, I couldn't do it so yeah.. that's been it. - John*

John also reported that some actions from the insurance provider were difficult to understand, owing to a lack of logic and common sense. It appeared this may have been caused due to the said actions not relating to his unique situation. In this instance John was perplexed by the insurance provider attempting to make a RTW date before a magnetic resonance imaging (MRI) scan had revealed the true extent of his back injury;

… so I got this lady on the phone on Friday and she's wanting to set up a, a timeline to get me back to work.. And I said, "oh well, don't you want to see an MRI first? ".. and she put it on me like, "oh well how does this date sound for?" (pause).. "oh you can put whatever date you like down, I'm a [tradesman] I'm not a medical practitioner or anything like that, and so I said, "it's kind of a waste of time isn't it, until I see the specialist after the MRI?".- John

This finding shares links with what was found by MacEachen et al., (2007) in study one who found that simplistic RTW programme logic led to issues such as workers feeling financially threatened and misunderstood. Unfortunately for John, there were more apparently non-sensical bureaucratic issues to contend with. In John's case, it seemed that the insurance providers' RTW policies also adopted a 'one size fits all' approach. John reported that the proposed graduated RTW plan from the insurance provider would only be suitable for a "desk jockey" (office worker). He then criticised the insurance policies for apparently not being able to cater to someone in his line of work;

… I mean yeah you probably wouldn't get that many desk jockeys that hurt themselves or something like that, I mean so the numbers are probably there and they're still trying to cater for people that are, do different sort of things, yeah or they don't understand the scope of work or what normally goes on, cos' yeah.. I've had nothing out of them but irritability really, yeah. -John

In then referring back to how thoughtful and measured John was with regards to the actions he took to "earn the trust" of his workplace described in "trust underpins WS", further bureaucratic idiosyncrasies appeared to compound his frustration. As discussed in "worker health or company wealth?" John felt that his rehabilitation was his responsibility as his injury did not happen at work. He was dumbfounded when when

advised by his workplace that an insurance provider had made considerable efforts to make contact with the workplace, especially as at that stage John himself was yet to receive any support from his insurers;

… so it does drive you up the wall a little bit because they're putting more effort I feel into that than actually getting me anywhere else.. yeah.. yeah any help. -John

*I'd tell them "can you not, you know.. if there's, if you need help with, or something like that I can go down and see them, deal with them personally".. you know where you've got case managers or something harassing work, before Christmas when I know they're busy. And I felt like, "can you please not bore them with anything like you know, trivial, that you know they can't do" cos' you might just piss them off and they'll say "ahh f*** all of this, let just get rid of him". -John*

John finally gave a reason which may have explained his actions to earn trust being dubbed a "delicate balancing act" within "trust underpins WS". His admission that he had lost his job in similar circumstances some years ago may have warranted his clear frustration with the insurance provider;

I've had it, I experienced it before when I had a head injury when I was younger, got hit by a car and that and yeah return to work programme was a bit difficult and things like that, they ended up just "ahh.. we can't do it anymore sorry", and that's it. -John

In taking John's point of view then, not only did the "one size fits all" stance of his insurance provider cause him significant stress with regards to the improper management of his injury, in his view the lack of awareness of the insurance provider to his situation unnecessarily put his job, and family at risk.

Medical providers were also found guilty of incorporating “one size fits all” approaches. In this case, Jeff received a medical certificate that did not reflect his needs given his working role;

… I wasn’t allowed to walk, I wasn’t allowed to umm carry stuff, drive, pretty much do anything… he was sending me back for sedentary duties but we didn’t have any. - Jeff

Kiwiguy too received a “one size fits all’ medical certificate;

Interviewer: … what has the [treating doctor] uhh signed you off as at the moment, fully unfit?

Kiwiguy: Uhh ,no it was for light work but there isn’t such a thing at [company].

Returning to John, the habit of some medical providers to issue such certificates was considered by John to delay any progress with regards to his injury, as his issue was not being addressed;

John: - It’d just be week on week, about sitting in the waiting room at [health clinic], “oh still got your back pain? Ok how are you for pain medication? Do you need anything? Oh OK alright, there’s another thing for a week”.

Interviewer: So not fixing the problem?

John: Not at all.

Interviewer: Just getting you out the door?

John: Yeah, out of their immediate space, getting you.. yep you’re a number and that’s it... Yeah umm, yeah they’re doing nothing for you really.

With John having serious financial issues since his injury, he had little choice but to keep returning to this particular medical provider because they did not demand a clinic surcharge. However, his situation finally escalated to the stage where he was forced to invest in a visit to his own family doctor. This decision created a unique opportunity to explore two contrasting methods of medical provision, but from the same participant's experience. In John's mind, the two services were incomparable;

> *It was nothing at all like my doctors.. (pause).. It was like well, "this is what's going on so far", he wanted to know everything, he looked it all up , he knew about [OT] being put on there, being able to talk with him too, umm and he discussed different options like getting the MRI the quickest way, and getting an MRI is going through one of the surgical consults. Cos' they've got the access to it quickest, things like that, uhh hurried things along. -John*

> *… like I didn't have to pay for, to go to [health clinic] cos' it was [insurance provider] or they got no surcharges, but I had to pay $35 for my own doctor.. but I mean I got things moved along. There's no comparison really, they might have the same job, same initials in front of their name, something like that but no comparison when it comes to actually helping someone a bit further along.. yeah..- John*

In examining these contrasting experiences, it appeared that there was no significant difference regarding the outlay of specialised skill or resources between the two services. John's doctor simply listened to him, took account of the situation, and then provided him with the support that he needed to "move along". John's family doctor's "made to measure" service was not the only example seen to mitigate the effects of "one size fits all' care across the participants' experiences. When a medical provider exercised interpersonal skills, participants reported that they felt more satisfied that the plan that had been put in place was tailored and appropriate, which then gave them confidence.

An example of such a scenario was the way in which Kiwiguy's OT resolved the problem the issuing of a "one size fits all" medical certificate had created for Kiwiguy and his managers.

Interviewer: How did that meeting go with [OT] and [manager]?

Kiwiguy: Yeah it was brilliant, umm [OT] sort of laid out what he was looking at, [manager] was talking about.. we went through what I did.

Interviewer: … how did that make you feel?

Kiwiguy: Ohh way better because I was thinking if I come back to light work , and as somebody worked out there isn't such a thing as light work at [company] where you're on your feet basically 7-8 hours of the day, and that was the, see my doctor put down, he recommended I work ten minutes, I rest ten minutes, work.. (pause).. well you can't do that, especially if you're on admin and you're the only person there, you can't just walk off and go, right I'm going to do what my doctor says.

Made to measure inputs were described to be implemented from the very beginning in Rayne's case. Rayne stated that she was very satisfied with the medical care she received both immediately after her injury, and during her RTW;

Interviewer: … at the hospital? Were you satisfied with the, the decisions made there?

Rayne: Oh definitely, cos' I had no idea what was going on, like, you know, it was all new to me.. umm so when they told me what was, what my injury was and the next steps to take, then I was fine.. (pause). And who to contact after that, so I had been provided all the information that I needed.

In this case the treating doctor took the time to explain what was going on, and also described the next steps moving forward which reportedly put Rayne's mind at ease. One can only speculate what would have happened if Rayne had instead been seen by Jeff's, Kiwiguy's or John's first doctor. Equally, John's recovery trajectory may have been different if he was seen by the doctor Rayne saw at the hospital.

After the hospital discharged her, Rayne was handed over to the care of her family doctor. The next sub-theme discusses the influence that communication between medical and insurance providers may have in the RTW context.

Communication connects the dots

This short sub-theme builds from "made to measure" approaches already described by acknowledging the role that communication between providers may play during a worker's recovery. Rayne reported that the appropriateness of graduated RTW plans put in place were owing to congruence between her doctor and her physiotherapist:

> *… I was getting updates from my physio.. umm and she was the one who recommended for me to do the four hours, umm three days a week, umm so she got back to my [treating doctor] and my medical certificate was updated.- Rayne.*

> *I did that and then I went back to my physio again, she said "yep, that's fine" try for 6 hours this time" so yeah I've gone for 6 hours, 3 days a week now. -Rayne.*

To provide a clear contrast, John lamented that if there had been such communication in the early stages of his rehabilitation, it may have expedited his recovery. John even gave

an example of how simple such an action could have been to implement, and this action may have got him back to work sooner;

> *… maybe the communication between the physio and doctors and [insurance providers], if they were like, "hey this isn't really working" a quick five minute brainstorm between three of them on the phones even like "hey we've got this case here, this isn't working, what can we do to go forward or can we?" and it probably would've just cut weeks off I think.. yeah. -John*

This example highlights in John's mind, how yet another "simple" act, could have provided John with the assistance that he needed. The above passages served to channel the participants' views with regards to the contrasting approaches they experienced. There were references made to suggest that RTW-Ex were influenced by these experiences, for example John was able to "move along" after receiving appropriate care.

The power of professionalism

On the subject of appropriate care, two participants reported that the care they received from some medical providers was more than just "made to measure", it was powerful, and absolutely pivotal given their situations. Rayne in particular, reported that the support she received from her OT, helped to guide her out of the bleak situation she was heading towards;

> *… because if it wasn't for him, showing, or telling me, and kind of showing me that point of view where he was coming from, I probably still would have been in the same place, I probably still, I maybe would have been depressed about it, because I thought that that's where I was going towards, was being depressed at that time, you know umm – Rayne*

The ability of her OT to "see" the issues that others in her workplace possibly couldn't, led to Rayne receiving the advice she needed to change her situation. This included showing Rayne why her current mindset was not helping her, showing her how to break her goal down into more manageable steps, and importantly equipping her with clear answers that she did not previously have, to her workplace's relentless questions;

> *… he changed my perspective on it and made me realise the outcomes of if you want to push yourself and you want to go back to what you were doing now, it's only gonna' affect you long term , you need to realise that, or if you take it step by step, day by day, long term, you're gonna' yep, everything is gonna' fall into place - Rayne*

Rayne then reported that the professional input she received had wider applications for her work in the future. Rather than describing the experience negatively, she then reflected upon the experience as something she learned from, and was empowered by;

> *<u>Interviewer:</u> … so it's been a learning process, hasn't it?*
> *<u>Rayne:</u> … Ohh heck yeah, heck yeah has it been a learning process for me, not only just healing yeah but, but learning..*

> *… yeah that's right, absolutely, it's absolutely not worth it and I can work, still be in the same mentality of work, work, work, work, work just, yep, yep, just yep, yep… there's barriers that I know, there's lines where I know not to cross anymore. -Rayne.*

Although it cannot be empirically proven that this example of powerful, professional care from the OT led to a significant change in Rayne's RTW-Ex, it stands to reason that

without this input, she may have experienced a different outcome. Despite the problems associated with Jeff's rehabilitation, he too made reference to the powers of his OT;

… the OT definitely, has made a huge impact, umm way better than it actually was before because.. he had actually I don't know, made everything, like took my stress away. Just at the first meeting. -Jeff

… umm he sat down with me I told him everything and then I just felt like so much weight was lifted, he was very understanding… I was so angry but then I thought "this guy has nothing to do with anything" so I'll be open and tell him my story, and so he made a massive impact in a good way, changed a lot of things. -Jeff

The participants' experiences within the theme of "is standard care sub-standard?" were presented to demonstrate how the differing actions from medical and insurance providers may have had an impact on the RTW-Ex of participants undergoing VR. It was presented that "one size fits all" approaches which were identified within participant interactions with medical and insurance providers may have had a negative effect on their RTW- Ex. However, "made to measure" approaches which also involved communication that connected involved providers, and powerful acts of professionalism were shown to buffer these negative effects. In best-case scenarios, such actions set the worker on the right pathway from the start.

The final question to be addressed is *"can RTW-Ex be influenced by worker identity?"*

This concept is addressed by the theme "what about the worker?"

4.6.2.5. What about the worker?

With regard to pre-injury capacity and its role on RTW-Ex, it quickly became apparent from analysing the data that assuming capacity to be a "physical" concept was naïve. Instead the participants described several unique characteristics that affected the ways in which their RTW-Ex may have formed. These characteristics were described as contributing towards an "identity". Some of these are described with support from two sub-themes;

Injured identity

Perspectives on pain

Injured identity

In referring back to section 2.1.3. "work and social health and wellbeing", the importance of work to social identity was described by three participants. Phil described his workplace as his pride and joy and noted that his workplace was in some ways a reflection of his skillset. Furthermore, his passion for work gave him an incentive to get back to work;

> *… you know you become proud of your job sort of thing you know.. and it's even if you are the only person at it and people go "how do you do it??" (laughs). It's still your pride and joy so I don't.. that gets you back a lot as well, it's just that wanting to come back to work, you know there sort of wasn't any time at all when I sort of thought.. "ohh this is cruisy, I could get used to this" you know, and nah I just wanted to get back to this place and looking after it again, so.. -Phil*

Rayne described that the tempo of her workplace matched her "driven" mentality, which had been ingrained in her from a young age;

But I honestly, I loved it I thrived off all the work you know, that, that was my mentality and yeah I had to instantly change all of that, and I wasn't used to it you know cos' since I was 14 years old that's how I've been is work , work, work , work, work, work. Its super important and that was my drive, that was my go. - Rayne

Jeff reported that work had a similar effect on him;

… so leading up to the injury I was really confident I would climb a scaffold like nothing and just do whatever I could because it made me feel uhh.. it gave me adrenaline. -Jeff

Therefore, when Jeff and Rayne experienced their injuries, they reported that the effects were not only physical. They also described the effects of their injuries to have caused a change in identity or that they'd had their powers stripped from them;

… all I can say is it was mentally challenging for me to change from one, it was like a changing my, you know changing myself.. from one person to another person umm.. and instantly - Rayne

… but with the accident it's, I don't know it's just frustrating, it's almost like I'm a completely different person after the accident cos' you kind of feel powerless to do anything- Jeff

Having an "injured identity" was reported to be an unexpected and distressing barrier that both Rayne and Jeff struggled to overcome. It was also considered whether this sub-theme could be linked to "injuries misunderstood by the workplace" as this reported change of identity was certainly not acknowledged or understood by the participants' workplaces.

Perspectives on pain

This sub-theme illustrates the differing perspectives some participants had with regards to pain, and in turn how these differences affected their RTW-Ex.

Phil tended to not see his injury as a barrier. Rather he saw it as a nuisance and appeared to be more concerned with returning to work, and "getting on with it";

> *… umm yeah I should be alright, once I've sworn (laughs) .. curse and just get on with it, yeah that's what I think with the leg. - Phil*

In contrast, Rayne did not share this view;

> *Rayne: I really don't know until I feel completely fit to come back to full time which I don't at the moment*
>
> *Interviewer: What would make you confident that, "yep I'm now ready"?*
>
> *Rayne: I'm ready? I would say, the "no pain", that's when I know I'm fully ready.*

In Jeff's case, pain was linked to fear. What's more, Jeff indicated that this pain was something that he could not come back from, which would have affected his RTW-Ex negatively, especially when considering a scaffolder needs to be able to lift heavy loads daily;

> *… even lifting anything just gives me fear because I'm like "it's gonna hurt" and I can't come back from that -Jeff.*

Furthermore, not knowing why he was still in pain became a major source of worry for John;

… now I've got to look forward to this MRI so I know what's going on with it. Cos yeah, not knowing is probably the worst thing. - John.

In John's mind, not having a clear diagnosis held him back from progressing as he believed that his pain was a sign of damage. By being given an explanation for his symptoms, he may have been able to form more realistic RTW-Ex, in allowing him to prepare accordingly (Carsten et al., 2013).

Despite also having to wait for an MRI, Phil responded differently to John. Phil did not appear to stress too much about the unknown cause of his pain, and instead reported that he was more concerned about going crazy from boredom;

… so that's what's happened sort of thing and so it seems to have worked out alright at this stage so we'll just.. wait and see how that goes and yeah.. -Phil

… "oh my god I'm going mad" you know ahh.. because you know I was getting bored stupid (laughs). -Phil

Kiwiguy shared an interesting perspective on pain, in that his "familiarity" with both pain and injuries requiring surgical procedures in the past appeared to allow him to remain unbothered about his injury. Not only did he describe that he was not worried about pain, but his knowledge of the likely processes involved with recovery gave him an air of confidence;

Interviewer: … another thing that strikes me in this scenario is your background of almost "knowing" pain..

Kiwiguy: Oh pain is my friend (laughs).

… I mean umm yeah there' is a light, I can see a light at the end of the tunnel cos' I can .. so I'm, I'm not overly worried

about the damage cos' it's either going to be one of two things you know as I said.. rest, strap, repair.. itself.. or surgery and repair. -Kiwiguy

It was as though Kiwiguy was able to call upon past experiences in coming up with an informed, realistic and positive perspective of what his RTW trajectory might look like. However, others did not have this experience to rely upon.

A final interesting feature with regards to the participants' perspectives on pain was noted. It appeared that John and possibly also Phil interpreted the amount of "time" they were in pain for as a means for predicting the seriousness of their injuries;

… yeah because it, it at first it felt like it might have been a sprain or something and that it would come right over time.. but now it's just I know that there's something in there that's very irritated and something probably broken or something like that, yeah I'm not too sure. – John

Even, Phil who was otherwise unflappable, admitted that he began to lose his composure as time wore on and his condition had not improved;

… I thought "oh, nah I'll be back after a week" (laughs).. (pause).. and yeah it just seemed to drag out, drag out drag out so.. and yeah then just a little bit of a worry. -Phil.

In addition to time in pain being a source of worry for the participants, John also stated that it had an effect on his RTW-Ex;

… yeah well the length of time has played into it a bit, whereas like yeah.. the longer it has taken feels like the longer it will be before I get back to work, yeah.. -John

“What about the worker?” presented factors such as the roles of their work within their identities, and perspectives on pain. It was demonstrated how these “worker” factors may have played a part with regards to influencing participants’ RTW-Ex. The differing roles “work” played within the participants’ daily lives prior to the injury along with their contrasting viewpoints and assumptions about pain may have impacted RTW-Ex.

In addressing the aim of study two, these five themes represented “how” the provision of WS and RTW-Ex were affected from the perspectives of the participants. These themes contained rich and descriptive experiences which were the product of an extensive six phase TA process informed by the findings of study one, researcher interpretation, and a social constructivist approach. These themes were presented in a way that reflected the processes that led to their construction. In some cases, the findings contained within the themes gave support to concepts and themes already referenced within study one. In other cases, the processes of study two gave way to the production of new ideas that expanded into the identified gaps in study one. The next section will discuss “how” these findings may assist in addressing RTW-Ex and WS in practice.

4.7. Study Two discussion.

Overall, dozens of positive and negative factors emerged from the dataset, and were discussed in this chapter. By utilising a philosophically informed TA to confirm or build from the insights gained from study one, these factors were able to be presented as themes that addressed the study aim. These themes demonstrated how the effects of the workplace system, trust, medical and insurance providers, and the participants’ own attributes related to RTW-Ex and WS. Furthermore, the relationship between RTW-Ex and WS was also presented. The insights gained were learned from the participants themselves. In referring again to 2.2.- philosophical underpinnings, the participants were the ideal “teachers” and the social constructivist approach provided the “classroom” for their experiences to be learned, then presented.

In the following section, several relationships between the presented themes will be discussed in relation to the roles they played in the participants' RTW processes after they had sustained a musculoskeletal injury. This discussion will also be supported by the findings of study one in reporting on how RTW-Ex and WS may be better addressed.

Worker health versus company wealth:

Within study two, the overarching workplace systems that participants entered back into were found to have a bearing on the provision of WS. Some of the factors discussed were more tangible, such as a workplace being able to offer modified duties, whereas other factors presented were more abstract such as the differing views workplaces had with regards to providing for a worker's needs. Some workplace environments were described as relaxed, flexible and supportive, whereas others were stressful, offered little shelter from workplace pressures, or were downright dangerous. In the context of RTW, it could be argued that some systemic factors are less controllable by workplaces, such as how large, or successful a company may be, or the type of industry they are involved in. In referring to factors presented in study one such as the financial pressures organisations face, one may accept that larger, fiscally secure workplaces, such as Kiwiguy's workplace may have greater flexibility in providing WS.

Trade industries with limited availability of light duties were noted by Kosny et al. (2013) as being less favourable workplace environments in relation to RTW. In study two for example, Jeff and John, whose jobs were reported to be in question following their injuries, were the two participants who worked within such industries. However, despite uncontrollable systemic factors, it is put forward that many workplaces within study two still had a choice in whether to be supportive. Presumably, the workplaces that were reported to offer comprehensive WS to participants within study two were also subjected to financial pressures. However, within the "worker health or company wealth?" section, these participants appeared to have been shielded from such pressures. The size of Kiwiguy's company, in having a surplus of personnel to cover the absence along with a well-developed health and safety department could be given as reasons why he may have felt so well- supported during his RTW. However, Phil's workplace was very small,

and there were no co-workers to cover him whilst he was away, in fact contractors needed to be brought in, presumably at a great cost to the workplace. Despite this, Phil denied experiencing any pressure from his employers during his nearly 12-week absence, in fact he could only recall immense support. It seems that Phil's workplace chose to ensure that his needs were met.

There is always going to be great variation in the workplace environments an injured worker enters back into. These may include company size, type of industry, or the availability of light duties. In some cases, such factors may suit the company, whereas in others, various circumstances may prevent a desirable situation. Nonetheless, injured workers should not be put at risk of long-term WD through inadequate WS owing to companies choosing to favour financial incentives and in turn, overlooking the needs of workers. It should also be noted that the participants of study two, reported hidden challenges such as being stressed, misunderstood, vulnerable and even experienced identity issues in some cases. These characteristics of injured workers are similar to those described in Kosny et al. (2013) who went on to report that workplaces overlooking injured workers' needs were particularly harmful as such workers were left isolated and ignored at a time when they felt most vulnerable. The reality that some workers with relatively "minor" injuries go on to follow a long-term WD trajectory (Westman et al., 2008) then appears unnecessary if such scenarios are indeed influenced by the choices workplaces make.

Having said that, there are "valid" reasons for not being able to provide WS. All participants within study two reported having physically demanding roles, and in John, Jeff and Kiwiguy's cases, light duties were not made available by their respective workplaces. In accepting that physical factors within certain industries may make accommodating physically intense work inappropriate or unsafe, the same lenience cannot be offered to the bureaucratic systemic issues that accompanied discussions about physically intense work in study two. Issues such as workplaces having concerns about whether they may be held liable if they were to accept a worker back onsite, and refraining from offering WS to a worker because their injury did not occur at work were

found to influence WS. These findings resemble Wrapson and Mewse (2011), whose New Zealand based study reported that employers found ACC processes to be unfamiliar, and RTW negotiations with injured workers to be an awkward task. Furthermore, as identified in study one, the bureaucratic difficulties associated with RTW processes may equally prevent workers from taking control of their situations (MacEachen et al., 2010). Within study two, if the participants' realities are in fact a fair reflection of the current VR practices in New Zealand, then involved stakeholders need to re-consider their current approaches towards dealing with these issues.

In Rayne's case, despite being provided light duties, she was left exposed to various pressures during the RTW process. These included relentless questions about her expected full-duty return, negative "vibes" from her managers and co-workers, and she even reported feelings of guilt from seeing colleagues struggle to meet the company's expectations whilst she watched on. The guilt Rayne experienced was due to witnessing the pressure her co-workers were under, yet for reasons unknown, they did not let her assist them. Rayne described that these factors took her to breaking point. In referring to MacEachen et al. (2007) who described issues resulting from a mismatch between workers current abilities and the situations they had been placed in, an action that may have mitigated this situation could have been making sure that the modified duties were well-organised and appropriate to her changing needs. Such supports also require regular monitoring throughout the RTW process (Lysaght & Larmour-Trode, 2008). This idea illustrates that for workplaces, good WS may not just be the provision of modified work, but more how it is implemented in a workplace environment.

Trust underpins workplace supports

Several aspects of trust were shown to influence the provision of WS in study two. It is also reasonable to suggest that trust may share links with "worker health or company wealth?", in that trust may be a mediator of workplaces' choices relating to the systemic issues discussed above. Whilst analysing the dataset there was some overlap between these two themes which could be seen. For example, a one-on-one participant interaction with a co-worker or supervisor described in "bonds of trust" may have

influenced the worker's needs being met as discussed in "systems designed with worker needs in mind". Furthermore, safety concerns reported in "worker needs overlooked" shared similarities with "expectations precede injury".

The revelation that some participants were shown to have expectations of WS that preceded their injuries was particularly thought provoking as it links trust and systemic processes, and pre-dates injury. This sub-theme may in part have been "conceived" based on a reflection during the researcher interview section within chapter 2.2. In this section, a researcher-identified link between a client's pre-existing opinion of ACC and their perception of the support they receive was described. Within study two this sub-theme was instead related to the workplace. The two examples that best described this sub-theme within study two were the contrasting views of Kiwiguy and Jeff. On one hand, Kiwiguy reported that his company were "very well set up for getting people back in and helping", referencing what he had himself seen, and what he had heard from others about the company's RTW policies. On the other hand, Jeff reported a culture of unsafe and blasé attitudes to health and safety in stating "they just don't seem to actually care, you could probably die and they'd just be like "oh great, there's a lawsuit coming our way" ". With these stories still in mind, it could be argued that a participant's trust in the workplace in relation to supporting them through their injuries could be influenced by actions they have witnessed in the past.

In keeping with this point, some companies may then inadvertently cultivate trust with injured workers through their workplace values and organisational culture. For example, both quantitative WS studies within study one made reference to values that underpinned their WS programmes such as "respect for everyone involved" and "involvement at every stage" (Amick et al., 2017; Shaw et al., 2008). Therefore, there may be value in workplaces promoting such organisational culture behaviours, as such practices may convey a subliminal message of "unconditional trust". It can only be speculated what effects organisationally driven acts such as trusting workers unconditionally may have had on the participants of study two. Presumably, this would have had implications for "accepting the veracity of the injury" and "misunderstood by the

workplace" where participants were forced to earn trust through their actions and were cast as outsiders within their workplaces.

Furthermore, the effectiveness of WS related interventions may be greatest if the organisations themselves are the targets. In acknowledging the influential roles that organisations have over supervisors and co-workers, in that "management sets the stage" (Kosny et al., 2013) it is envisaged that a "root and stem" effect may be observed if efforts are focussed towards instigating change at the organisational level. In demonstrating this hierarchical influence in a negative context, such as in Jeff's workplace where an "us versus them" scenario with other co-workers taking sides was reported to have been created and controlled by his manager. The effect, referred to as the "discourse of abuse" by Kosny et al. (2013), was reported to stem from Jeff's manager's doubts about the veracity of Jeff's back injury. In acknowledging the resemblance between Kosny et al. (2013), a Canadian study of electrical workers, and Jeff's descriptions, it would be reasonable to suggest that negative workplace cultures that discourage workers from supporting each other may be common across the trade industries in other nations as well.

Hypothetically speaking, if organisationally- targeted interventions aimed at promoting organisational culture in a workplace environment like Jeff's were investigated, the effects of the systemic and trust issues raised on WS may be gauged. However, this way of thinking is fairly novel in WD research as much of the available literature regarding disability management programmes target workers, not organisations (Amick et al., 2017).

The value the worker had to the workplace was discussed as a potential mediator of trust within the participants' responses. In again considering "systems designed with worker needs in mind" it could be argued that the exceptional WS offered to Phil was at odds with the rest of the findings. However, the support he received from his employers may have been influenced by the value of his skills and experience. Similar trends were also detected in Kiwiguy and John's stories, where both men reported that they felt re-assured in knowing that they were an asset to their employers. This sub-theme may also

have had a bearing in Jeff's experience. In being candid about the replaceable nature of his role, Jeff noted that if his manager "needed to get rid of someone it would definitely be my head on the chopping block".

Trust was also described when the participant and the employer were in agreement about decisions. In Jeff's case, he was at odds with his employers which was discussed in relation to the "discourse of abuse" he suffered in his workplace (Kosny et al., 2013). In all other participants' cases, there was "concurrence" between the two parties involved. However, an interesting finding was noted in John and Kiwiguy's situations. Although the decision from the employer was not technically "work-supportive" as they rejected the medical certificates that had been presented, these two participants felt supported by their employers as they agreed with the decision. John went on to say that he would have been suspicious of the employer if they had accepted the proposition.

These sections demonstrated that there was a relatedness between the two WS themes discussed and also between the findings of study one and study two. The findings of study two either supported existing research presented in study one, or used study one to build new theories from.

The counter-productive effects of systemic issues from the insurance perspective will be discussed later on under the heading "is standard care sub-standard?"

Workplace supports move my goal

Apart from the study by Young et al., (2015) research into defining and measuring RTW-Ex is yet to be thoroughly investigated. At this stage, however, it may be reasonable to entertain the idea that a worker may base their RTW-Ex on such factors as their own perceived functional ability and the workplace environment they are entering back into. The concept that providing modified work may alter RTW-Ex was brought up in study one. It was also shown that many of the WS factors discussed within study two had the ability to directly, or indirectly influence a worker's calculations. A direct example of WS influencing RTW-Ex was the rejection of Jeff's graduated RTW plan. If this had been accepted, he would have been able to reach a further stage of his RTW goal. However,

instead he was left, defeated and depressed, with the ordeal having a major effect on his willingness to go on. An indirect influence of RTW-Ex was Phil's employers "being there" for him from the outset. Such actions assisted Phil in realising he was not facing his barriers alone, and in turn may have improved his outlook when it came to thinking about RTW. One point worth considering is that WS were not necessarily limited to "soft" features such as being empathetic of a worker's situation (Lysaght & Larmour-Trode, 2008). Instead, these findings warrant further research that could investigate more "concrete" WS actions such as the effectiveness of different modified duties frameworks, or comparing WS across different industries. Within study one it was reported that it remains unknown whether RTW-Ex can be modified (Reme, et al., 2012). However, when reviewing these participants' descriptions of WS, it is put forward that as opposed to being an unchangeable concept formed immediately after sustaining an injury, the influence WS was shown to have on RTW-Ex may indicate that it is in fact modifiable. There were several references made within study two that supported that RTW-Ex were a fluid and impressionable concept, at least according to the experiences of participants of study two.

Is standard care sub-standard?

Although such a small cohort cannot be used to make claims about the care injured workers may receive, it was alarming to find that the majority of participants reported being subjected to a "one size fits all approach". In some cases, this was experienced by the treating doctors who provided the participants with inappropriate medical certificates, and in others, the insurance providers promoted RTW plans that had little or no relevance to the participant. If making judgements surrounding RTW in light of the clear evidence that the risk of long-term WD increases with time off work (Turner et al., 2006), such findings within RTW processes are worrying. The majority of participants within study two admitted that there was a stage in their recovery where they could see themselves "slipping" towards depression, or a sickness benefit. It could be argued that some of these experiences were more in relation to inadequate WS. However, it remains to be seen how the effects of "made to measure" medical or insurance approaches could

set the tone prior to, and during re-engagement with the workplace. In this study, Rayne reported tailored initial care and seamless transitions between medical providers. John finally saw the potential for progress after his doctor took the time to listen to him. The effects such actions could have had in the remaining participants' scenarios should be considered. In contrast to what could be termed a "shut the gate after the horse has bolted" scenario, would OT efforts to "save" Jeff's job have been more effective if he had received appropriate medical care from the get-go? Furthermore, factors such as the continuity of care between providers facilitated through communication were highlighted to have an influence on participants' RTW successes. In addition to this, the power of some providers to see workers' issues that had previously gone undetected were shown to completely transform a situation as in Rayne's case. It is then contemplated how such actions may affect RTW-Ex.

The findings of study two provided further evidence that RTW-Ex were not fixed, but fluid as they were shown to respond to the various factors discussed within the study. This again challenges Reme et al. (2012), who reported that it remains unclear whether RTW-Ex can be influenced. Furthermore, it was apparent that factors that may have a negative influence on RTW-Ex such as "one size fits all" care, may also be modifiable. An example would be the enhancing the ability of medical and insurance providers to listen, understand and in turn perform actions that are more appropriate given the injured worker's circumstances.

Given John's situation and what is known about the costs and trends of WD, described in chapter two, if a doctor at a health clinic in New Zealand cannot at the very least perform these three steps, then such clinics could be seen as an indictment of our healthcare and workers compensation systems. In accepting that there will invariably be diversity in the approaches doctors take when treating injured workers, the point that needs to be made is that some participants within study two experienced care that was below what some may consider a "bare-minimum".

Although improving the quality of services is an appropriate suggestion, the time and effort to achieve may mean years before an impact is detected. In a shorter timeframe,

making apparently oblivious medical and insurance providers aware of the potential consequences of actions discussed by offering such findings to involved stakeholders would be a sensible first step. Other steps could include investing in more occupationally oriented doctors or even health clinics. It was identified that “no- cost” medical providers were linked to brief, unhelpful and “sub-standard” appointments. However, it was also shown that financially vulnerable injured workers such as John, may be forced into choosing such a service. For this reason, greater parity across healthcare clinics needs to be considered by involved stakeholders. When calculating the costs involved with financially supporting a long-term WD worker, few would argue that $35 for a “made to measure” approach would be a waste of resources if it could contribute to preventing long-term WD. In summary, the findings of study two again challenge that RTW-Ex may be modifiable. In this case, it is put forward that medical and insurance providers may affect RTW-Ex. Although other experiences were noted, the negative effects from sub-standard medical provision were found to play a to play a particularly negative role in study two.

What about the worker?

The original question brought forward from study one that had been earmarked to inform this theme was modified in response to the finding within study two that “physical” concepts such as pre-injury function did not do the participants’ descriptions justice. In its place “identity” allowed for a broader theme to develop that better reflected the participants’ views. Two main features of the participants’ identities were presented. Firstly, the importance of some participants’ roles to their overall identities were described in order to better illustrate that an event that prevented a participant from continuing their role, for example an injury, may also affect their identity. In turn this was reported to have consequences for their RTW-Ex in study two. This concept was described within the sub-theme “injured identities”. Secondly, the contrasting perspectives that participants brought into study two with regards to how they viewed and responded to pain were presented in “perspectives on pain”. It was apparent that across the participants, differing levels of value or respect were assigned to pain. For

some, such as Rayne, pain was considered a barrier not to be crossed, whereas others such as Phil saw pain as a mild inconvenience but certainly not a barrier. Furthermore, for some participants such as John and Jeff, pain instilled fear in them, whereas in Kiwiguy's case it appeared that his experiences had allowed him to "tame" pain, even referring to pain as his friend in one instance. It was also questioned in study one whether referencing healing timeframes could influence RTW-Ex. In Kiwiguy's case at least, it appeared that his knowledge of such timeframes from previous injuries may have led him to aligning his RTW-Ex more realistically.

A further trend, in that some participants such as John, and even Phil grew more wary of pain the longer it stayed present for, was identified. In John's experience, the long-lasting nature of his LBP gave him the grounds to believe that his back might be fractured. This may illustrate the power of unremitting pain, especially when considering the original mechanism of injury, where he briefly slipped, not even losing his footing. Furthermore, John's RTW-Ex were reported to decline in response to the time that he had already been off work. This shared links with Carsten et al. (2013), who found injured workers' recovery expectations to decline after sustaining back injuries. John's statement may have relevance when contemplating why the risk of long-term WD has been shown to increase with increased time off work (Turner et al., 2006).

This discussion served to illustrate how the reported findings stemming from both studies related to each other and related to RTW-Ex and WS. The findings were also discussed in terms of how we may better address RTW-Ex and WS.

5. DISCUSSION.

5.1. Summary of findings.

By contrasting the current problems WD has created against the background of this research topic, the reasons for the undertaking of study one and study two were justified. Both studies involved numerous “frameworks” taken from existing literature, or newly constructed where necessary, that enabled the studies’ aims to be appropriately addressed. Study one investigated what effects RTW-Ex and WS had in relation to influencing RTW timing. In order to achieve this aim, a systematic literature review of international literature, designed with the assistance of a pilot background review was performed. Additionally, a purpose built hierarchical WS framework enabled a clearer view of the concepts that formed the term WS.

The results of study one found that there was high quality evidence supporting that both RTW-Ex and WS predicted RTW outcome. More specifically, high RTW-Ex or positive WS were associated with favourable outcomes, and low RTW-Ex or poor WS were associated with poorer RTW outcomes.

The findings of study one also led to the identification of five research gaps that in essence, demarcated the specific areas for study two to focus upon. The aim of study two was to reveal how the effects of RTW-Ex and WS may be better addressed from the perspectives of injured workers currently experiencing acute MSD. This aim lent itself to the undertaking of qualitative interviews informed by a social constructivist approach. TA was chosen as a suitable method to analyse data.

The identified gaps brought forward from study one were developed into five focussed questions which guided the interviewing stages of study two. After the data had been collected, these questions were in some cases modified to better illustrate the experiences the participants shared. A six phase TA process resulted in the production of five themes that demonstrated the effects of RTW-Ex and WS in response to the

guiding questions. The themes were; “worker health or company wealth?”, “trust underpins WS”, “WS move my goal”, “is standard care sub-standard?” and “what about the worker?”. These themes were presented in study two and were then discussed in relation to study one findings and how the effects they described may be used to improve VR practice.

Overall, this research is original in that to the best of my knowledge, it is the first of its kind to investigate the described effects of RTW-Ex and WS using the described methods that explored the perspectives of workers undergoing RTW processes, at least in New Zealand’s RTW context. The clinical implications of these findings are outlined below.

5.2. Practice implications.

This section provides a brief summary of how some of the findings presented within study one and study two may better address RTW-Ex and WS in VR practice.

Firstly, with regards to systemic issues that workplace environments face, it was reported that although some factors were found to prevent workplaces from providing for the needs of injured workers, workplaces may have more choice than they realise. In discouraging workplaces from overlooking the needs of workers, it may be worthwhile to outline the demonstrated effects of systemic issues on WS and in turn RTW. Furthermore, other strategies that highlight that WD can only be solved in collaboration with the workplace may have an impact (Amick et al., 2017).

On the other hand, it was reported that physically intense work can be difficult to accommodate, and in some cases, not being able to provide modified work may have been justified. However, cases where WS were provided inappropriately or where bureaucratic issues were present were found to unnecessarily threaten RTW. RTW stakeholders may see a benefit from investing in strategies to make companies’ responsibilities within the RTW process more transparent, or raising awareness about VR in workplaces. If necessary, changes to legislation may be warranted in ensuring that

the processes designed to assist injured workers in getting back to the workplace aren't in fact doing the opposite.

The relationship between trust and systemic issues was discussed in depth within study two .In addition to these factors being found to be major players in the provision of WS. It was found that the integration of these factors may implicate organisational culture in facilitating the provision of WS. Workplace systems that emit positive values (L. Shaw, et al., 2008), may in turn convey messages of unconditional trust to their employees. Furthermore, the findings within study one indicate that organisations have been shown to influence the behaviours of supervisors and co-workers (Kosny, et al. 2013). This provides further support to the recommendation that efforts to promote workplace systems that tend to workers' needs and cultivate trust should be aimed at the organisational level. This implication may have considerable impact as past efforts to influence WS have focussed on workers, not organisations (Amick et al., 2017).

Whilst still on the topic of trust and systemic issues, the processes involved within study one and study two led to a clearer presentation of findings known to influence WS. By better organising this somewhat fragmented topic, an improved awareness of WS in clinical practice may result. In the VR context, it could now be argued that being aware of factors that facilitate and inhibit WS would be of great relevance to involved stakeholders in assisting with the development of VR interventions, in the name of WD prevention.

The identified relationship between the provision of WS and participants' RTW-Ex is a "fitting" link that tied the two key concepts this thesis aimed to investigate together.

In addition to WS, other factors were identified to influence RTW-Ex. This supports the previously unanswered question of whether RTW-Ex can be modified (Reme et al. 2012), may now be a step closer to being answered. RTW-Ex have been reported as the most consistent and powerful predictor of RTW known (Dunstan, et al., 2013). Therefore, if RTW-Ex can in fact be influenced by any or all of the factors reported to do so within study two then these findings may have considerable implications for clinical practice. However, further research would need to mediate this transition.

Despite its apparent predictive power, RTW-Ex are not measured routinely, at least in New Zealand's VR context. It was found in study one that RTW-Ex studies employed a variety of outcome measures to assess RTW-Ex, and they also used nuanced definitions of RTW-Ex. It is then questioned whether the introduction of a more standardised method of assessing injured workers' RTW-Ex may assist its use in hospitals, health clinics and in other VR scenarios. Furthermore, due to it being a self-reported measure, there would be no significant costs involved with its implementation. This consideration is supported by Reme et al. (2012) who reported that there should be no need to wait for the development of chronic disability factors to surface if risk factors of long-term WD can be reliably assessed early.

With regards to "perspectives on pain" described within "what about the worker?" a link between one finding and other factors discussed could have practice-based relevance when considering that the risk of long-term WD increases with increased time off work (Turner et al., 2006). Within study two, certain participants assumed that the time that had elapsed owing to injury, predicted the severity of their injury, and their RTW-Ex. For example, John reported that his back must have be fractured because it had not "come right" over time, then admitted that "the longer it has taken feels like the longer it will be before I get back to work". However, when reviewing the findings presented study two, it now could be strongly argued that "one size fits all" experiences from both medical and insurance providers, and factors discussed relating to trust and systemic issues in the workplace may have equally played a part in John's delayed recovery. This suggests that workers may overlook bio-psychosocial factors in favour of bio-medical solutions to their problems.

In elaborating upon the finding that medical or insurance providers were reported to influence RTW-Ex, especially "one size fits all" approaches, some clinical implications are summarised. Firstly, improving the standard of care specifically for injured workers needs to be a focus for involved stakeholders. Fortunately, sub-standard care appears to be resolvable. The steps of listening, taking account of workers' situations, and in turn providing tailored care are therefore argued to be fundamental in facilitating "made to

measure" approaches delivered by medical providers. In accepting that it may take time to raise the current standard, short term solutions are offered. It is put forward that making apparently oblivious medical providers aware of the reported effects of sub-standard care, along with encouraging RTW stakeholders to either remove or standardise surcharges across health clinics would count as a step in the right direction towards supporting the prevention of WD.

Although not covered in as much depth in the discussion of study two, insurance providers too were reported to employ "one size fits all" approaches. In their defence, insurance providers are answerable to the larger insurance systems that govern them, and may not have the extensive medical training or duty of care that in theory should maintain standards. Regardless, insurance stakeholders might consider whether investing in strategies such as having RTW plans that better reflect the needs of injured workers with physical or complex employment situations, along with the personnel to deliver these plans may be worthwhile. This consideration should be taken in light of the effects the absence of such strategies had on the participants within study two.

In relation to the context that study two was undertaken within, demographic statistics presented in chapter 2.1.10. highlighted that study two was conducted in a location where there are a high percentage of people living outside of urban areas compared with larger centres, and a higher than average Māori population. Given this, arguably improving VR service delivery in response to the study's findings may also play a part in addressing identified inequalities in vocational rehabilitation which affect people who live rurally and/or who are Māori.

5.3. Strengths and limitations.

With regards to study one, the inclusion of qualitative studies that involved participants with non-acute MSD could be seen as a limitation, however only three WS studies would have been retrieved had it not been for this decision. Furthermore, one quantitative study by L. Shaw et al. (2008) included in the findings of study one was found to have a high

risk of bias which was also a limitation. Several challenges were faced with regards to the available literature being fragmented and at times scarce within study one. However, these challenges led to the development of frameworks and search strategies which enabled a robust and specific systematic literature review. The findings also identified specific gaps in the literature which dovetailed with aim of study two.

Some strengths and limitations regarding the participant recruitment, the data collection and the generalisability of the findings of study two are given below.

The participants themselves were recruited from the Northland region of New Zealand and were all in the midst of attempting to get back to work after having suffered an acute musculoskeletal injury. When considering the demographic make-up of the Northland region detailed in 2.1.10. - New Zealand's health context, the participants of this study were diverse in providing a true representation of the Northland region. For example, there was considerable validation for the assumption detailed within the researcher interview in chapter two. It was reported that due to its Northland location, study two may get a less urban, and rather a more "grass roots" feel. There were several great examples illustrating that participants' views were unique to New Zealand. Phil and Kiwiguy in particular, being the two older participants within the study made several references to the classic New Zealand "she'll be right" attitude when describing their injuries. Kiwiguy explicitly stated that strapping his knee up and "soldiering on" at work is a typical "New Zealand" response. These aspects gave me some confidence in that the findings of study two were indeed developed from "real" Northlanders. Two participants identified as being of New Zealand Māori descent. In terms of diversity, it was also considered advantageous to have recruited a female participant along with a rurally-located participant within the final sample. Although all participants described their roles as physical, the occupations that the participants belonged to were also suitably diverse. These factors acted as a strength of the study, in demonstrating that the findings were drawn from a sample that suitably generalised the Northland region. Furthermore, the relevance of the findings are supported by the identified health and inequality issues the Northland region faces, also presented in 2.1.10. – New Zealand's health context.

However, study two failed to recruit any participants with a sedentary role. When reviewing the strategy for recruiting the participants for this study, the instruction that only VR providers could identify potentially eligible participants may have had a part to play. It is possible that many injured workers with sedentary jobs did not need to have a VR provider assigned to their case as RTW may not have been as challenging. In any case, having at least one participant with a sedentary role would have benefitted the diversity of study two. Therefore, a more appropriate recruitment strategy enabling frontline providers such as health clinics or case co-ordinators at ACC could have led to a more diverse sample being recruited.

Apart from undertaking training interviews, prior to study two I had never conducted interviews with participants. Social constructivism encourages a personal and flexible approaches that are receptive to capturing deeper meaning through interacting with participants (Hudson & Ozanne, 1988). However, being a novice researcher, my lack of experience may have limited the potential for such meaning to be "captured".

Finally, due to New Zealand's unique landscape from a personal injury insurance perspective, these findings are evidently applicable to this VR industry. However, some clinical implications may be restricted to countries where a similar insurance scheme is provided. In acknowledging the differences inherent in other countries' VR systems, the findings presented may lack relevance in some cases.

5.4. Future research directions.

Firstly, in supporting reports by Amick et al. (2017) that WS programmes target workers, not organisations, future research examining the multiple potential effects of organisationally targeted WS initiatives could be influential in the development of future strategies aimed at WD.

Further research into the most effective methods for measuring RTW-Ex would be worthwhile. Of the variety of outcome measures known to assess RTW-Ex, and the

aforementioned nuanced definitions of RTW-Ex, examining which are most accurate would be worthwhile.

Importantly, empirical evidence validating several claims made within study two, especially with reference to confirming the question of whether RTW-Ex can be influenced is an area where future research needs to be directed towards. As outlined in the clinical implications section, confirming the whether RTW-Ex can be influenced could have considerable implications for VR practice.

As an example, it was highlighted in study one that future research could further break down RTW-Ex into “light duties RTW-Ex” and “full duties RTW-Ex”. This may be worthwhile as measuring for differences between these two concepts may then detect the factors that cause these differences. For example, perhaps workers may be able to “re-align” their RTW-Ex upon arriving back into the workplace environment. It could be investigated whether the opportunity to measure their current capacity against the demands of their workplace environment may have an effect on “full duties RTW-Ex”. Furthermore, various WS interventions could be investigated in relation to whether they improve full RTW-Ex.

Finally, the findings were reliant upon the hierarchical WS framework and other decisions made in study one that offered a clearer approach for reconstructing a somewhat fragmented WS topic. As a result, further investigations especially into the effects of trust and systemic issues on WS may now may have a stronger foothold to be launched from.

5.5. Conclusion.

This thesis set out to better understand the roles of RTW-Ex and WS in influencing RTW within the context of WD.

The findings of study one supported that RTW-Ex were able to predict RTW outcomes. Within study two, RTW-Ex were then found to be influenced by medical and insurance providers, and WS amongst other factors. It was outlined that empirical evidence confirming whether RTW-Ex can be influenced by such factors may have significant implications for clinical practice.

WS were also found to predict RTW outcomes in study one. Within study two, it was discussed that the provision of WS were primarily influenced by inter-related trust and systemic issues amongst other factors. Furthermore, the organisation was described as being the most influential stakeholder in the context of WS. Therefore, the organisation was identified as a prime target for WS initiatives.

The findings presented are original, and contribute to the growing body of knowledge in this research area. Personally, the experience has provided me with innumerable answers (and further questions) that I could not have otherwise obtained. These findings have implications for those at risk of being affected by WD, including injured workers, their families, employers, and society alike. Furthermore, these findings represent a step towards providing those with a vested interest in WD, being medical providers, VR providers, insurance or workers compensations systems and even governments, with the necessary expertise to better protect those vulnerable to the costly and long-term threat WD poses.

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APPENDICES.

Appendix A: Ethics Approval

Auckland University of Technology Ethics Committee (AUTEC)

Auckland University of Technology
D-88, Private Bag 92006, Auckland 1142, NZ
T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

14 August 2018

Joanna Fadyl
Faculty of Health and Environmental Sciences

Dear Joanna

Re Ethics Application: **18/294 Return to work expectations and workplace supports in New Zealand; Injured workers' perspectives**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 14 August 2021.

Standard Conditions of Approval

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through http://www.aut.ac.nz/research/researchethics.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through http://www.aut.ac.nz/research/researchethics.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: http://www.aut.ac.nz/research/researchethics.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. You are reminded that it is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

For any enquiries, please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

Cc: therory88@gmail.com; Gwyn Lewis

Appendix B: Documents

i) Interview guide

Interview guide

Study Title	Return to work expectations and workplace supports in New Zealand; injured workers' perspectives.
Study Design	Interpretive / thematic analysis
Study Participants	Workers with acute musculoskeletal injuries
Target Sample Size	8
Study Period	August 2018- March 2019
Research Question	What can injured workers in NZ teach us about how these factors could be effectively addressed within the Vocational Rehabilitation process?

Agenda:

-consider researcher safety protocol requirements

-meet and greet participant

-sensitivity checks i.e. offer a drink and identify restrooms if in a neutral location, ask about house rules if at participant's home. Check that participant is comfortable with arrangement of room, ask whether they have any cultural, medical or other requests i.e. they may need a break to stretch legs, refill drink, or use restroom

- summarise information sheet prior to obtaining informed consent

-set up primary and back up recording devices (check spare batteries are available)

-begin audio recording and populate demographic information sheet on interviewee's behalf

-commence interview (please refer to interview principles below)

-stop audio recording at conclusion of interview

- field interviewee questions, administration, gift voucher, re-iterate contacts, provide copy of consent form, farewell.

-complete researcher safety requirements (contact buddy)

-ensure the safe transfer of the collected data to the repository identified in the data management safety protocol (sharepoint)

Scope:

Exploring workers' perspective of RTW-Ex + WS during their VR process.

Overarching principles:

-Te Ara Tika (HRC guidelines) i.e. Mana + Manaakitanga (equity + respect, care and hospitality) in ensuring a safe and welcoming social environment for participants

-Social model of disability (Tiaho trust) i.e. Disabled individual vs. disabling environment theoretical constructs

-AUT thematic analysis workshop notes (Dr. Gareth Terry) the overall aim is to produce a surplus of rich, descriptive raw data from each interview to assist the researcher in "telling the best story possible".

-Utilise constructive feedback given on 16/05/18 during three one-on-one interviewing training sessions with J. Fadyl, D.Payne, G. Terry:

Summary:

1) only assume the role of the listener, it is not the interviewer's role to solve problems. Remember that the process is inductive, not deductive

2) take control over the pace and tempo of the interview. Slow down, get comfortable with long pauses, try to promote an environment where the participant feels comfortable to contemplate questions and express themselves without feeling pressured

3) remember that no interview will go exactly as planned, be ready to adapt and explore depending what the participant may share or how they may respond to your questions or probes

4) allow time at the end of the interview for participants to share any of their thoughts and give them the option of speaking "off the record"

Question starters:

Tell me about - In your own words - In your experience - Can you describe

INJURY -when and how injury occurred - progression to current stage of recovery -future prognosis -challenges faced since being injured (feelings at home, coping with change of structure routine?) - other challenges faced during recovery -confusion, uncertainty -process- control- informed decision making, well planned -RTW- Ex. origin, course, change, why? -pre-injury function **WORKPLACE** - veracity of injury -how this has injury affected work -describe workplace - unique occ. skills/ role -org structure -length of tenure/ trust as currency	-employer supportive communication -context (heavy physical, WA, job stress, support, fear re-aggr, nervous/unsure, past exp, doc. opinion. Pain/ funct limit) - colleagues/ supervisor response to your situation - cope with the demands of working at current capacity -contact with workplace whilst off work -how to take employer contact- genuine concern or intruding on recovery/ obligated to be supportive /unfamiliar/ awkward task -in house comp, conflicts of interest, incentives etc -understanding compassion, encouragement -what does work mean (central to identity or a pay cheque?) -knowledge exchange, problem solving, partnership	**INFORMING QUESTIONS:** -Can workplace environment affect WS? -Can trust affect WS? -Can WS affect RTW-Ex? -Can medical provider affect RTW-Ex? -Can context (i.e. heavy physical) affect RTW-Ex?

ii) Participant information sheet

Research invitation and participant information sheet.

Project Title

Return to work expectations and workplace supports in New Zealand; Injured workers' perspectives.

Kia Ora, my name is Rory Christopherson, and I invite you to participate in this research project. I work as a Physiotherapist in assisting people to return to work after injury and I am currently undertaking a Masters' degree at Auckland University of Technology (AUT). Completing this research project will contribute towards achieving this qualification.

What is the purpose of this research?

The purpose of this research is to help reduce the overall impact that injuries can have on peoples' everyday lives. By doing this, we also aim to assist in reducing long-term disability.

During the project we will be collecting information about injured workers' experiences. The main areas in which the injured worker will be asked to share their experiences are;

i) their expectations of returning to work AND

ii) any workplace supports they may be receiving

For the participants, it is a chance to share their rehabilitation story and reflect on their experiences to date.

For the researcher, it is a chance to listen, learn and contribute to what is already known in this field of research.

How was I identified and why am I being invited to participate in this research?

This research project is targeted towards workers who have sustained a recent injury. To participate, such workers are invited to partake in an interview about their experiences of their injury and rehabilitation. A number of Occupational Therapists based in the wider Auckland and Northland regions have agreed to assist in this recruitment process by contacting potentially eligible clients.

If you meet the following criteria then you may be able to take part in this study:

-aged between 18-65

-can speak English fluently enough to participate in a face to face interview

-have sustained an injury (to muscles, tendons, ligaments, bones or joints in any area of your body) within the past 6 weeks that has stopped you from being able to perform your normal work

-are/were employed with one company for a minimum of 30 hours per week immediately prior to the injury and have not since been stood down or made redundant

-are not a sole-trader or a business owner

-have not yet been medically cleared to make a full return to your normal work

-do not suffer from a significant pre-existing disability

How do I agree to participate in this research?

To register interest, either contact the researcher directly, or let your Occupational Therapist know you are happy for the researcher to contact you. Once have you received the information, you will need to decide whether you would like to take part within 3 days. Subject to eligibility, you will be asked to complete a consent form which will be provided on the day of the interview. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you.

You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

The process is as follows:

Once you have registered your interest, contact will be made by email or phone call from the researcher to

i) check/ confirm eligibility

ii) field any unanswered questions/queries about the project

iii) set up a suitable time and place for an interview

On the day of the interview you will meet the researcher at the time and place agreed by you and the meeting will involve the following:

i) You will receive a brief introduction about the interview and audio recording processes to take place and then can read through and sign the informed consent document (you will be provided a copy)

ii) the interview will then commence when the audio recorder is switched on

iii) immediately after the interview has concluded, there will be some time available for any questions/comments along with the presentation of a small token of appreciation (fuel voucher) for your services to the project.

After the interview process has been completed, the audio recording will be typed out into a written document along with all of the other interviews from other participants. During this process **all** of your identifying details will be removed so that you cannot be identified in any reports of the findings. The interviews from all participants will be analysed and finally, the findings will be presented as part of the completed project.

What are the discomforts and risks?

How you will feel when talking to the researcher during the interview depends on your experiences and thoughts about the topics discussed. Some questions from the researcher might be hard to talk about if you have had difficult experiences.

It is not expected that there will be any physical risks associated with taking part in the interview.

It may feel uncomfortable to share personal information, or information relating to your employer or rehabilitation. You can choose not to answer any question, and the researcher can answer any questions you have about how your privacy is protected. You can choose to avoid particular topics or stop the interview at any stage.

What are the benefits?

Research on return to work aims to find ways to help people overcome injuries as quickly as possible and ensure that their re-entry into the workforce is safe and lasting. In addition, this research will benefit the researcher in assisting them in completing a Master's degree.

How will my privacy be protected?

Privacy will be protected through ensuring that confidentiality is upheld throughout the entire research process. This not only relates to the initial interview and data collection stages, but also through ensuring there is a plan in place for the safe storage of all data until it can be destroyed.

Information that could potentially identify a participant, employer, location or any other party mentioned within the interview process will be kept **strictly confidential**. This will be maintained by removing any identifying information from interviews before they are analysed. This might involve changing names and replacing organisations and places with a more general description (e.g. "large factory" in place of the name of an organisation).

What are the costs of participating in this research?

There is no cost to participate in this research. Please allow a total of 2 hours for the entire interview process from start to finish.

What opportunity do I have to consider this invitation?

You will have 3 days to consider the invitation. Please feel free to discuss this with people you trust. You are welcome to contact the researcher directly if you have any questions about the project that may affect your decision.

Will I receive feedback on the results of this research?

A summary of results will be available when the project has been completed. If you wish to receive a copy, please confirm your interest on the informed consent sheet on the day of interview.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor Dr. Joanna Fadyl, joanna.fadyl@aut.ac.nz, 09 921 9999 ext 7675

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, ethics@aut.ac.nz 09 09 921 9999 ext 6038

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form (provided on the day of your interview) for your future reference.

You are also able to contact the research team as follows:

Researcher Contact Details:

Rory Christopherson: rory@m3clinic.co.nz 09 4388207

Project Supervisor Contact Details:

Dr. Joanna Fadyl: joanna.fadyl@aut.ac.nz, 09 921 9999 ext 7675

Dr. Gwyn Lewis: gwyn.lewis@aut.ac.nz, 09 921 9999 ext 7621

This research project has received full ethical approval from the Auckland University of Technology Ethics Committee (AUTEC) on 14/08/18. AUTEC reference number: 18/294.

iii) Consent form

Consent Form

Project title: ***Return to work expectations and workplace supports in New Zealand; Injured workers' perspectives.***

Project Supervisors: **Dr. Joanna Fadyl, Dr. Gwyn Lewis**

Researcher: **Rory Christopherson**

- ○ I have read and understood the information provided about this research project in the Information Sheet
- ○ I have had an opportunity to ask questions and to have them answered.
- ○ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ○ I may be contacted after the interview by the researcher if further clarification about a particular piece of information I have given is needed.
- ○ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ○ I understand that if I withdraw from the study then I will be offered the choice between having any data belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ○ I agree to take part in this research.

Participant's signature: .....

Participant's name: .....

Do you wish to receive a summary of the research findings?

Yes ○ No ○

Participant's Contact Details:

.....

.....

.....

Date: .....

Approved by the Auckland University of Technology Ethics Committee on the 14/08/2018 AUTEC Reference number 18/294

Appendix C: Critical appraisal scoresheets

ROBA scoring sheets

(WS) L. Shaw et al. (2008). ROBA CRITICAL APPRAISAL SCORESHEET	Y	N	U	N/A
Study Population				
a) -Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b) -Inclusion/exclusion criteria clearly outlined?		✓		
c) -Important basic characteristics of the sample are reported?		✓		
Study Attrition				
d) -Complete data for at least 80% of the initial study sample size?	✓			
e) -Reasons for loss to follow-up reported?				✓
f) -The basic characteristics of those who were lost to follow-up are reported?				✓
g) -Are there important differences between those who were lost to follow-up and those who completed the study?				✓
Prognostic factor measurement				
h) -Clear definition or description of the predictive factors?	✓			
i) -Predictive factors measured by valid and reliable instruments?		✓		
Outcome measurement				
j) -Clear definition of the outcome is provided including duration of follow-up?		✓		
k) -The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account				
l) -Multivariate analysis used to adjust for potential confounding variables?		✓		
m) -Confounders are measured using valid and reliable methods?		✓		
n) -Confounders are accounted for in study design (e.g. matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?		✓		
Analysis				
o) -Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			
p) -Was the method of variable selection for regression modelling reported and justified?		✓		
q) - Was the number of variables in the model appropriate and/or justified?		✓		
r) -Was correlation between potential predictor variables/collinearity taken into account in variable selection?		✓		
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable	**Total: 5/18**			

(WS) Amick et al. (2017). ROBA CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Study Population					
a)	-Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b)	-Inclusion/exclusion criteria clearly outlined?		✓		
c)	-Important basic characteristics of the sample are reported?	✓			
Study Attrition					
d)	-Complete data for at least 80% of the initial study sample size?	✓			
e)	-Reasons for loss to follow-up reported?				✓
f)	-The basic characteristics of those who were lost to follow-up are reported?				✓
g)	-Are there important differences between those who were lost to follow-up and those who completed the study?				✓
Prognostic factor measurement					
h)	-Clear definition or description of the predictive factors?	✓			
i)	-Predictive factors measured by valid and reliable instruments?	✓			
Outcome measurement					
j)	-Clear definition of the outcome is provided including duration of follow-up?	✓			
k)	-The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account					
l)	-Multivariate analysis used to adjust for potential confounding variables?	✓			
m)	-Confounders are measured using valid and reliable methods?	✓			
n)	-Confounders are accounted for in study design (e.g matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?	✓			
Analysis					
o)	-Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			
p)	-Was the method of variable selection for regression modelling reported and justified?	✓			
q)	- Was the number of variables in the model appropriate and/or justified?	✓			
r)	-Was correlation between potential predictor variables/collinearity taken into account in variable selection?		✓		
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 13/18**			

(RTW-Ex.) Besen et al. (2015). ROBA CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Study Population					
a)	-Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b)	-Inclusion/exclusion criteria clearly outlined?	✓			
c)	-Important basic characteristics of the sample are reported?	✓			
Study Attrition					

d)	-Complete data for at least 80% of the initial study sample size?	✓			
e)	-Reasons for loss to follow-up reported?				✓
f)	-The basic characteristics of those who were lost to follow-up are reported?				✓
g)	-Are there important differences between those who were lost to follow-up and those who completed the study?				✓
Prognostic factor measurement					
h)	-Clear definition or description of the predictive factors?	✓			
i)	-Predictive factors measured by valid and reliable instruments?	✓			
Outcome measurement					
j)	-Clear definition of the outcome is provided including duration of follow-up?	✓			
k)	-The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account					
l)	-Multivariate analysis used to adjust for potential confounding variables?	✓			
m)	-Confounders are measured using valid and reliable methods?	✓			
n)	-Confounders are accounted for in study design (e.g. matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?	✓			
Analysis					
o)	-Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			
p)	-Was the method of variable selection for regression modelling reported and justified?	✓			
q)	- Was the number of variables in the model appropriate and/or justified?	✓			
r)	-Was correlation between potential predictor variables/collinearity taken into account in variable selection?		✓		
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 14/18**			

(RTW-Ex.) Turner et al. (2006). ROBA CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Study Population					
a)	-Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b)	-Inclusion/exclusion criteria clearly outlined?	✓			
c)	-Important basic characteristics of the sample are reported?	✓			
Study Attrition					
d)	-Complete data for at least 80% of the initial study sample size?			✓	
e)	-Reasons for loss to follow-up reported?		✓		
f)	-The basic characteristics of those who were lost to follow-up are reported?		✓		

g)	-Are there important differences between those who were lost to follow-up and those who completed the study?			✓	
Prognostic factor measurement					
h)	-Clear definition or description of the predictive factors?	✓			
i)	-Predictive factors measured by valid and reliable instruments?	✓			
Outcome measurement					
j)	-Clear definition of the outcome is provided including duration of follow-up?	✓			
k)	-The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account					
l)	-Multivariate analysis used to adjust for potential confounding variables?	✓			
m)	-Confounders are measured using valid and reliable methods?	✓			
n)	-Confounders are accounted for in study design (e.g matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?	✓			
Analysis					
o)	-Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			
p)	-Was the method of variable selection for regression modelling reported and justified?	✓			
q)	- Was the number of variables in the model appropriate and/or justified?		✓		
r)	-Was correlation between potential predictor variables/collinearity taken into account in variable selection?	✓			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 13/18**			

(RTW-Ex.) Reme et al. (2012).	**ROBA CRITICAL APPRAISAL SCORESHEET**	Y	N	U	N/A
Study Population					
a)	-Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b)	-Inclusion/exclusion criteria clearly outlined?	✓			
c)	-Important basic characteristics of the sample are reported?	✓			
Study Attrition					
d)	-Complete data for at least 80% of the initial study sample size?		✓		
e)	-Reasons for loss to follow-up reported?	✓			
f)	-The basic characteristics of those who were lost to follow-up are reported?		✓		
g)	-Are there important differences between those who were lost to follow-up and those who completed the study?			✓	
Prognostic factor measurement					
h)	-Clear definition or description of the predictive factors?	✓			
i)	-Predictive factors measured by valid and reliable instruments?	✓			
Outcome measurement					

j)	-Clear definition of the outcome is provided including duration of follow-up?	✓			
k)	-The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account					
l)	-Multivariate analysis used to adjust for potential confounding variables?	✓			
m)	-Confounders are measured using valid and reliable methods?	✓			
n)	-Confounders are accounted for in study design (e.g matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?		✓		
Analysis					
o)	-Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			
p)	-Was the method of variable selection for regression modelling reported and justified?	✓			
q)	- Was the number of variables in the model appropriate and/or justified?		✓		
r)	-Was correlation between potential predictor variables/collinearity taken into account in variable selection?	✓			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 13/18**			

(RTW-Ex.) Kapoor et al. (2006). ROBA CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Study Population					
a)	-Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b)	-Inclusion/exclusion criteria clearly outlined?	✓			
c)	-Important basic characteristics of the sample are reported?		✓		
Study Attrition					
d)	-Complete data for at least 80% of the initial study sample size?	✓			
e)	-Reasons for loss to follow-up reported?		✓		
f)	-The basic characteristics of those who were lost to follow-up are reported?		✓		
g)	-Are there important differences between those who were lost to follow-up and those who completed the study?			✓	
Prognostic factor measurement					
h)	-Clear definition or description of the predictive factors?	✓			
i)	-Predictive factors measured by valid and reliable instruments?	✓			
Outcome measurement					
j)	-Clear definition of the outcome is provided including duration of follow-up?	✓			
k)	-The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account					
l)	-Multivariate analysis used to adjust for potential confounding variables?	✓			
m)	-Confounders are measured using valid and reliable methods?	✓			

n)	-Confounders are accounted for in study design (e.g matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?	✓			
Analysis					
o)	-Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			
p)	-Was the method of variable selection for regression modelling reported and justified?	✓			
q)	- Was the number of variables in the model appropriate and/or justified?		✓		
r)	-Was correlation between potential predictor variables/collinearity taken into account in variable selection?		✓		
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 12/18**			

(RTW-Ex.) Murgatroyd et al. (2016). ROBA CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Study Population					
a)	-Description of the sampling frame, recruitment, period and location of recruitment?	✓			
b)	-Inclusion/exclusion criteria clearly outlined?	✓			
c)	-Important basic characteristics of the sample are reported?	✓			
Study Attrition					
d)	-Complete data for at least 80% of the initial study sample size?		✓		
e)	-Reasons for loss to follow-up reported?	✓			
f)	-The basic characteristics of those who were lost to follow-up are reported?	✓			
g)	-Are there important differences between those who were lost to follow-up and those who completed the study?	✓			
Prognostic factor measurement					
h)	-Clear definition or description of the predictive factors?	✓			
i)	-Predictive factors measured by valid and reliable instruments?	✓			
Outcome measurement					
j)	-Clear definition of the outcome is provided including duration of follow-up?	✓			
k)	-The outcome is measured using valid and reliable instruments?	✓			
Confounding measurement and account					
l)	-Multivariate analysis used to adjust for potential confounding variables?	✓			
m)	-Confounders are measured using valid and reliable methods?	✓			
n)	-Confounders are accounted for in study design (e.g matching, stratification or assembly of comparable groups) or in the analysis (e.g. appropriate adjustment)?	✓			
Analysis					
o)	-Method used for the statistical analysis was appropriate for the outcome studied and the measures of association estimated according to this model OR/RR (including 95% CI) and numbers in the analysis (totals) were presented?	✓			

p)	-Was the method of variable selection for regression modelling reported and justified?	✓			
q)	- Was the number of variables in the model appropriate and/or justified?	✓			
r)	-Was correlation between potential predictor variables/collinearity taken into account in variable selection?	✓			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 17/18**			

JBI scoring sheets

(WS) MacEachen et al. (2007). JBI CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Question number					
1.	Is there congruity between the stated philosophical perspective and the research methodology?	✓			
2.	Is there congruity between the research methodology and the Research question or objectives?	✓			
3.	Is there congruity between the research methodology and the methods used to collect data?	✓			
4.	Is there congruity between the research methodology and the representation and analysis of data?	✓			
5.	Is there congruity between the research methodology and the interpretation of results?	✓			
6.	Is there a statement locating the researcher culturally or theoretically?	✓			
7.	Is the influence of the researcher on the research, and vice-versa, addressed?		✓		
8.	Are participants, and their voices, adequately represented?	✓			
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	✓			
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	✓			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 9/10**			

(WS) Lysaght & Larmour-Trode (2008). JBI CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Question number					
1.	Is there congruity between the stated philosophical perspective and the research methodology?	✓			
2.	Is there congruity between the research methodology and the Research question or objectives?	✓			
3.	Is there congruity between the research methodology and the methods used to collect data?	✓			
4.	Is there congruity between the research methodology and the representation and analysis of data?	✓			
5.	Is there congruity between the research methodology and the interpretation of results?	✓			
6.	Is there a statement locating the researcher culturally or theoretically?	✓			
7.	Is the influence of the researcher on the research, and vice-versa, addressed?		✓		
8.	Are participants, and their voices, adequately represented?	✓			

9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?		✓		
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	Y			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 8/10**			

(WS) Wrapson & Mewse, (2011). JBI CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Question number					
1.	Is there congruity between the stated philosophical perspective and the research methodology?		✓		
2.	Is there congruity between the research methodology and the Research question or objectives?	✓			
3.	Is there congruity between the research methodology and the methods used to collect data?	✓			
4.	Is there congruity between the research methodology and the representation and analysis of data?	✓			
5.	Is there congruity between the research methodology and the interpretation of results?	✓			
6.	Is there a statement locating the researcher culturally or theoretically?		✓		
7.	Is the influence of the researcher on the research, and vice-versa, addressed?	✓			
8.	Are participants, and their voices, adequately represented?	✓			
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	✓			
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	✓			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 8/10**			

(WS) MacEachen et al. (2010). JBI CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Question number					
1.	Is there congruity between the stated philosophical perspective and the research methodology?	✓			
2.	Is there congruity between the research methodology and the Research question or objectives?	✓			
3.	Is there congruity between the research methodology and the methods used to collect data?	✓			
4.	Is there congruity between the research methodology and the representation and analysis of data?	✓			
5.	Is there congruity between the research methodology and the interpretation of results?	✓			
6.	Is there a statement locating the researcher culturally or theoretically?	✓			
7.	Is the influence of the researcher on the research, and vice-versa, addressed?		✓		
8.	Are participants, and their voices, adequately represented?	✓			
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	✓			

10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	✓
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 9/10**

(WS) Kosny et al. (2013). JBI CRITICAL APPRAISAL SCORESHEET		Y	N	U	N/A
Question number					
1.	Is there congruity between the stated philosophical perspective and the research methodology?	✓			
2.	Is there congruity between the research methodology and the Research question or objectives?	✓			
3.	Is there congruity between the research methodology and the methods used to collect data?	✓			
4.	Is there congruity between the research methodology and the representation and analysis of data?	✓			
5.	Is there congruity between the research methodology and the interpretation of results?	✓			
6.	Is there a statement locating the researcher culturally or theoretically?	✓			
7.	Is the influence of the researcher on the research, and vice-versa, addressed?		✓		
8.	Are participants, and their voices, adequately represented?	✓			
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	✓			
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	✓			
Key: (Y)= yes, (N) = no, (U)=unsure, (N/A)= not applicable		**Total: 9/10**			

Appendix D: Sample of thematic analysis coding

Transcript:	Coding: black= semantic, grey= latent
Interviewer: have you picked up anything else while you, while you've been around? Any other vibes or things in the air?	
Rayne: to be honest, yeah absolutely.. you can pick up negative vibes left, right, well I know I can, left right and centre.. so when you're kind of being shut out of something, I, that's how I feel.	catching vibes in working environment feels excluded
Interviewer: what kind of stuff?	-
Rayne: umm so like the umm.. work-related things, so that cos' I was always the type to wanting to be involved in everything so I was kind of the one who wanted to know what was going on with everything umm you know how things were ticking on and when I kind of asked the questions, you know "who's doing this, who's doing that now?" you know cos' I'm wanting to keep myself updated, it's kind of like, "oh well you don't really need to know that kind of stuff, you're only here part time, so you know, it's not really relevant to you" and that, those, that vibe kind of makes me feel a little bit left out, only because you know I'm getting, the "well you're not really here full- time so you don't need to know"..	vibes related to workplace wants to keep up to date ·· worker identity ·· worker-employer communication loop isolated by the workplace because working part-time feels excluded·· perceived as punishment ·· misunderstood by workplace
Interviewer: mmm..	
Rayne: and it's like "mmm well yeah, I'm here part time but I want to know still what's going on.. I still want to be kept in the loop with everything", I mean and again it's mentally like, "oh ok.." (laughs)	wants to keep up to date ·· worker-employer communication loop perceived as punishment ·· misunderstood by workplace ·· mental challenge
Interviewer: mmm yeah and with that I suppose on the opposite, what was it like being at home and going from such a hard worker and so, and having, a priority every day, to …	
Rayne: to nothing.. oh it was, ohh I can't even explain, can't even put words into it, it was… so draining for me, like so I don't know emotionally I was so distraught cos I was like, " I just want to get back, I, I'm sick of being in pain, I just, I'm not used to this I want to get back to doing my work.. you know I can't handle this", I could, I really couldn't mentally handle being at home especially being in pain. So it was so challenging for me.. umm and yeah that's all I can say is it was mentally challenging for me to change from one, it was like a changing my, you know changing myself.. from one person to another person umm.. and instantly it was yeah I don't..	inexplicable feeling ·· struggled to cope being off work in pain poses large mental and emotional distress for the worker mental challenge ·· worker identity ·· injured identity

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