Working with musculoskeletal pain

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SUMMARY POINTS:

- Pain has a significant impact on work in terms of presenteeism, sickness absence, and long-term incapacity for work
- A bio-psychosocial approach is required in understanding pain-related disability and incapacity for work
- Long-term absence from work is associated with a number of negative outcomes including; poverty, social exclusion and poorer physical and psychosocial well-being
- Return to work can improve recovery for people with musculoskeletal complaints and pain
- Interventions to reduce the impact of pain on work can operate at clinical, worker, workplace, and wider systems levels
- A broader whole systems approach to pain management needs to be adopted, with a greater focus on work retention as well as rehabilitation

Introduction

Pain and musculoskeletal complaints have a major impact on work in terms of presenteeism (reduced productivity and performance at work), sickness absence and long-term incapacity for work¹. The economic costs of reduced work capacity due to pain vastly outweigh direct medical costs^{1,2}. As a result, this is a highly politicised issue, with increasing interest from the government, insurers and employers in reducing the impact of pain on work. However, in the midst of this, the implications of loss of work capability for the individual are often overlooked. Remaining at work or returning as soon as possible can be beneficial to people with health problems; it improves recovery and health outcomes, reduces the risk of experiencing the negative social, psychological, and physical effects of long-term sickness absence³. Thus, reducing the impact of pain on work is an important clinical as well as social and economic challenge. The aims of this review are to:

- Highlight the impact of pain on work
- Identify potentially modifiable factors that influence the impact of pain while at work and on return to work
- Provide an overview of interventions that target these factors

The impact of pain on work

Far from being the exception, the vast majority of people will experience pain to one degree or another during their working lives. In the general population, episodes of musculoskeletal pain are usually self-limiting and many people remain at work or return quite quickly. Only around 1% to 2% of episodes of sickness absence in workers go on to become long-term incapacity for work⁴. It is estimated that chronic pain of moderate to severe intensity occurs in 19% of adult Europeans, seriously affecting their daily activities, social and working lives⁵, while one in six working adults in Australia are affected by chronic pain⁶.

Health problems can adversely impact on work in a number of ways, which can be broadly categorised under the headings of absenteeism and presenteeism. Absenteeism can be defined as absence from work through ill health; it is the very lowest level of occupational performance. 'Presenteeism' can be defined as being at work in spite of illness. However, this is a broad definition and can encompass a whole range of scenarios, referring both to the way that health impacts on work for people who are able to attend work as well as individuals who attend work when they are too unwell to do so. The economic costs associated with reduced work capacity as a result of pain are very high on a global level and run in to several billion pounds annually in the UK alone¹. Pain and musculoskeletal complaints account for approximately 20% of claims for long term state incapacity benefit (IB) in the UK⁴. Approximately 75% of these health problems are classed as being

mild to moderate rather than severe in the medical sense, due to limited or inconsistent evidence of pathology despite the potential for considerable functional impairment⁴. However, the highest costs appear to be those associated with presenteeism, rather than sickness absence or long-term incapacity for work¹. A study of the relationship between absenteeism and presenteeism demonstrated that 25% of absentees experienced a loss of productivity before their absence and 20% after they returned⁷. Although there is a distinction in the literature between factors that influence performance while at work and those that are associated with return to work, absenteeism and presenteeism are intrinsically linked and should be considered in relation to one another. Many common factors will contribute to long-term incapacity for work, although this comes with its own specific challenges. These individuals will have been out of work for a considerable time, they will be further from the labour market, and the strong association between socio-economic deprivation and long term incapacity means that these individuals are likely to face multiple barriers to return to work⁴.

Bio-psychosocial models

Bio-psychosocial models place psychosocial factors as a key component of the illness experience, both influencing and being influenced by physical factors and symptoms⁸. They have been particularly useful in clarifying the relationship between musculoskeletal complaints and work, highlighting how the individual is part of a complex system interacting with their immediate work environment, the organisation, healthcare and other

services, and socio-economic context on a micro and macro level⁹. This is illustrated in Figure 1.

Psychosocial risk factors for incapacity

There is an extensive list of clinical and psychosocial risk factors for long term disability and incapacity for work. These include age, pain intensity, psychological distress, fear/avoidance, catastrophizing, pain behaviour, job dissatisfaction, not being employed, expectations about return to work, financial incentives, and clinical history¹⁰. Many of these factors can potentially be modified, and are therefore useful in identifying and supporting individuals who are at risk of diminished work capacity.

Sullivan *et al*¹¹ proposed that the psychosocial factors that influence the impact of pain on work could be sub-divided in to Type I factors within the individual (e.g. beliefs and fears), and Type II factors *outside* the individual (e.g. the workplace and insurance systems). Similarly, the 'Flags' system, with its focus on the identification of various types of modifiable risk factors highlights the multi-factorial nature of disability and incapacity¹². Red flags are signs or symptoms that may be indicative of serious underlying pathology, while Orange flags are indicators of psychopathology and yellow flags encompass psychological and social/environmental risk factors. In occupational contexts, risk factors can be divided in to Blue flags and Black flags. The former refer to *perceptions* of work (e.g. relationships with managers, control over workload), and the latter to more *objective* features (e.g. contract type, sickness absence policies). In health psychology, the Illness Flexibility Model¹³ postulates that sickness absence and attendance behaviour are inter-related and are driven by:

1. *attendance requirements*; the negative consequences of absence for the employee such as impact on work tasks or colleagues.
2. *adjustment latitude*; opportunities to work despite illness such as moderations to work.

These act as 'push and pull' factors in determining sickness absence and presenteeism.

From a wider socio-economic perspective, cultural factors, labour market forces and regional deprivation can alter the impact of health problems on work⁴. From a sociological viewpoint, people who are ill may adopt the 'sick role'¹⁴, where they become exempt from normal social roles and responsibilities and are entitled to special care. However, this is conditional on viewing illness as undesirable, seeking professional help and engaging in the process of getting well. This, in combination with the desire to be viewed as a valued member of society and as a 'good worker', can lead to a strong culture of presenteeism¹⁵. This is an important motivation to work unless absolutely necessary. However, establishing the

Figure 1. *The individual with pain as part of a complex system*

legitimacy of 'unseen' complaints, such as pain and depression, can be problematic and reduced work capacity due to these complaints can become stigmatised¹⁵. This can lead to a reluctance to disclose problems or access support and attending work even when too unwell to do so.

Several factors beyond the control of the individual can act as barriers to working with health problems, particularly in the context of long-term incapacity for work, including age, poor work history, low skills and employer discrimination⁴. These problems can be compounded in socio-economically deprived communities where people face multiple disadvantages, such as dependency on benefits extending across subsequent generations, shifting social norms, poor health, low levels of education and skills, and a limited availability of jobs that command a high enough wage to make work pay¹⁶. Capacity for work is a complex and morally charged issue and it is vital that contextual factors are considered in developing and implementing interventions and policies relating to health and work.

Improving return to work and work retention

Return to work and work retention interventions can operate on both individual and systems levels, focusing on;

- clinical management
- workers or the workplace (occupational/organisational factors)
- socio-cultural or structural change

Presenteeism and absenteeism can pose different challenges in terms of their management, and are often treated as separate issues. However, they are inter-related; sickness absence policies that aim to return people to work quickly can lead to an increase in presenteeism, whereas people with pain who are struggling while in work could later become absentees without the right support. A joined-up approach is required to improving return to work and performance outcomes, and therefore we discuss these together.

Interventions focussing on clinical management

Interventions that focus on the effective clinical management of musculoskeletal pain encompass a broad range of issues, requiring a focus on improved functioning rather than on reduction of pain severity. Clinical guidelines are available on identification and management of Yellow flag risk factors for disability^{17,18}. Assessments tools such as the Örebro Musculoskeletal Pain Questionnaire (ÖMPQ)¹⁹ and Fear and Avoidance Beliefs Questionnaire (FABQ)²⁰ can also be useful in identifying those at risk of absenteeism. The FABQ is a 16-item measure consisting of two factors; fear-avoidance of physical activities and fear-avoidance of work. The ÖMPQ includes 25 items relating to functioning, pain, psychological distress, fear-avoidance, work (satisfaction, expectancy of return to work, and heavy/monotonous work), and coping. Both are brief,

valid and reliable measures that are predictive of both current and future disability and sickness absence^{19,23}.

Individualised pain management and exercise programmes typically focus on improving an individual's functional ability and coping strategies, often incorporating cognitive and behavioural techniques. In certain populations, patients treated in multidisciplinary programmes have lower costs, are more likely to return to work, and have greater pain control than those managed with a more traditional biomedical approach²⁴. However, the evidence is not unequivocal, and these programmes do not necessarily include an occupational component or have return to work or improved work performance as a desired outcomes¹. Changes specifically in work related fear-avoidance following an interdisciplinary pain management programme have been found to be a stronger predictor of physical capability for work than pain severity or fear of physical activity²⁵. Furthermore, accessing specialist multi-disciplinary pain services can be problematic; provision of services across the UK is varied and there is often a shortage of consultant sessions, support staff and premises²⁶. Improving access to specialist pain management services and incorporating work related goals could have considerable benefits in reducing the impact of pain on work.

General practitioners play an important role in influencing capacity for work, both via the clinical management of pain and due to their contractual obligation to provide sick certificates for social security purposes. Beliefs that work is generally harmful or prevents recovery, lack of training, understanding, time, and motivation can all affect judgements about the complex issue of fitness for work⁴. Sick certification can reinforce the 'sick role' and adaptation to invalidity, which can potentially have;

*"...catastrophic social consequences for the patient, including loss of employment and long-term incapacity"*⁴(p. 53).

Avoiding conflict with patients accounts for much of the problem of implementing evidence relating to the management of back pain in general practice²⁷. However, a greater emphasis on training in communication skills for medical students and doctors can help them to better manage difficult consultations²⁸.

Worker and workplace focussed interventions

While there is a general consensus that working with pain is better for health and well-being than not working, work varies widely in its quality and nature³. Adverse job conditions, such as insecurity and high levels of strain/demands, can be detrimental to health and well-being²⁹. Many of the challenges in working with health problems centre around communication and balancing the expectations, needs and goals of employees, line managers and the organisation⁹. Interventions in the workplace can be worker-focussed interventions (Type I) or system/organisation focussed (Type II)¹¹. In a systematic review³⁰, interventions that successfully reduced psychological ill-health and sickness absence had employed training and organisational approaches to:

- Improve communication e.g. ensuring that staff are clear about organisational goals and the organisation's expectations about their performance
- Increase participation in problem solving and decision making e.g. using quality circles, where a group of usually 8 to 10 employees meet to discuss workplace improvements and present their ideas to management
- Increase support and feedback e.g. supportive appraisal interviewing

Beyond the individual worker, organisation-focussed interventions can improve employee well-being and organisational functioning. These include;

- Health management policies e.g. health promotion, disease prevention, safety management
- Improving communication and social climate e.g. providing common room facilities, dignity and equality at work policies
- Provision of training and support for supervisors in effectively implementing relevant policies.

Recent evidence indicates the quality of management, work design and work culture has a stronger association with presenteeism than absence. This highlights the potential for workplace and worker focussed interventions to improve work performance as well as return to work outcomes for people with musculoskeletal pain, although this has not been adequately explored.

Socio-cultural and structural change

On a societal level, interventions designed to elicit social, cultural or structural change can be used, including public health campaigns and changes in government policy. Public information campaigns in both Australia and Scotland have been successful in changing both public and health professionals' attitudes towards managing back pain by promoting the 'keep active' message^{31,32}. Government policies influence a number of areas relevant to working with pain, including: the social welfare system, access to healthcare services, provision of education, and labour market/economic factors.

Contextual factors such as socio-economic deprivation need to be considered in the development and implementation of government policy, with an emphasis on joined-up thinking. For example, in socio-economically deprived communities, initiatives such as introducing conditionality for incapacity benefits (i.e. an obligation to participate in return to work initiatives for receipt of benefit) may not be effective unless other factors such as skills/education, transport links, and availability of appropriate jobs are also improved¹⁶.

Timing of interventions

Interventions need to be developed that are timely as well as effective. The optimal period for return to work interventions appears to be

one to six months⁴. During the acute phase (<3 to 4 weeks absence), the vast majority of people with common health problems return to work quite quickly (90-99%)¹⁰. However, the likelihood that an individual will return to work reduces dramatically over time. By the chronic stage (>6 months absence), the probability of returning to work is greatly diminished. Around 40% of people who move on to Incapacity Benefit in the UK (usually after 28 weeks statutory sick pay) will still be receiving this benefit a year later¹⁰. They are then likely to remain on long-term incapacity for several years irrespective of treatment¹⁰. Interventions therefore need to be timely as well as easily accessible, cost-effective and complementing existing occupational health services when applicable.

Conclusions

The impact of pain on work comes at a high cost to individuals in terms of their health and well-being, as well as placing a significant burden across society. There is a need for a broader approach to work retention and rehabilitation that reflects the complex and multi-factorial nature of presenteeism, absenteeism and long-term incapacity for work. A greater emphasis needs to be placed on improving functioning rather than reducing pain. The potential for early screening and intervention needs to be investigated to ensure that people are appropriately supported before job loss and entry into benefits. However, strategies are also required to support those furthest from the labour market, for whom returning to work is likely to be particularly challenging. A 'joined-up' whole systems approach is required in addressing the multiple factors that can contribute to reduced capacity for work.

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