Risk perception in relation to musculoskeletal disorders

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RESEARCH REPORT 284
Risk perception in relation to musculoskeletal disorders

System Concepts Ltd were commissioned to carry out research to identify how employee populations perceive their risk of experiencing musculoskeletal disorders (MSDs), both in terms of understanding what people’s risk perceptions are and how to change them through targeted information.

The objectives of this project were to:

• determine the accuracy of lay perceptions about the risk of experiencing MSDs
• identify factors that influence risk perception in relation to MSDs
• identify what communication channels are viewed by workers as the most effective for obtaining accurate information about MSDs
• identify common misconceptions about the risk of experiencing MSDs
• identify and develop strategies for influencing risk perceptions.

We found that overall, the people in our sample were informed about the risks of back pain and upper limb disorders (ULDs) and had realistic perceptions of the likelihood of suffering from them and of the main risk factors. There was some confusion about terminology, with the terms musculoskeletal disorder and upper limb disorder being less well understood than the term back pain. We also found that different industry groups (from Small and Medium Sized Enterprises (SMEs), non-SMEs, construction and health care) demonstrated different levels of understanding and favoured different approaches to communicating the risks and preventative measures. For example, the construction industry participants were far more in favour of compulsory training than the other groups.

Our recommendations include:

• Reviewing the terminology used by the HSE to describe MSDs
• Providing support to help organisations develop and maintain a safety culture
• Targeting resource material and approaches to the different industry groups.

This report and the work it describes were funded by the Health and Safety Executive (HSE). Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and do not necessarily reflect HSE policy.
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EXECUTIVE SUMMARY

System Concepts Ltd were commissioned to carry out an exploratory research project to identify how employee populations perceive their risk of experiencing MSDs, both in terms of understanding what people’s risk perceptions are and how to change them through targeted information.

The objectives of this exploratory project were to:

- determine the accuracy of lay perceptions about the risk of experiencing MSDs
- identify factors that influence risk perception in relation to MSDs
- identify common misconceptions about the risk of experiencing MSDs
- identify what communication channels are viewed by workers as the most effective for obtaining accurate information about MSDs
- identify and develop strategies for influencing risk perceptions.

There were three main parts of the study:

- Reviewing available literature on risk perception of MSDs
- Conducting a questionnaire survey over the telephone
- Conducting focus groups.

We found that overall, the people in our sample were informed about the risks of back pain and upper limb disorders (ULDs) and had realistic perceptions of the likelihood of suffering from them and of the main risk factors. There was some confusion about terminology, with the terms musculoskeletal disorder and upper limb disorder being less well understood than the term back pain. We also found that the different industry groups (from Small and Medium Sized Enterprises (SMEs), non-SMEs, construction and health care) demonstrated different levels of understanding and favoured different approaches to communicating the risks and preventative measures. For example, the construction industry participants were far more in favour of compulsory training than the other groups.

Although this was a modest exploratory study with a limited sample, we have generated a number of recommendations based on the findings. These include reviewing the terminology used by the HSE to describe MSDs, providing support to help organisations develop and maintain a safety culture and targeting resource material and approaches to the different industry groups.

We would like to take this opportunity to thank all those who responded to the questionnaire and helped with this research.
INTRODUCTION

Musculoskeletal disorders (MSDs) are the commonest form of occupational ill health. The Health and Safety Commission has identified the importance of tackling MSDs in order to meet the targets in Revitalising Health and Safety for reducing the incidence of work-related ill health.

However, the risks of developing MSDs are often overlooked by individuals until it is too late possibly because there can be a significant lag between the cause and the effect. It is also often difficult to determine underlying causes and to distinguish occupational from other factors. Accurate risk perception in the health and safety arena is therefore important in order to facilitate employee’s duty of care to themselves, which means that appropriate risk communication is vital. Risk communication through official guidance and training are two factors that may influence an individual’s perception of the risk of experiencing MSDs at work. The Health and Safety Executive needs to make best use of its resources in targeting people with accurate information through effective communication channels, in order to influence their behaviour with respect to MSD risks.

System Concepts Ltd were therefore commissioned to carry out an exploratory research project to identify how employee from four industry groups perceive their risk of experiencing MSDs, both in terms of understanding what people’s risk perceptions are and how to change them through targeted information.

The objectives of this project were to:

- determine the accuracy of lay perceptions about the risk of experiencing MSDs
- identify factors that influence risk perception in relation to MSDs
- identify common misconceptions about the risk of experiencing MSDs
- identify what communication channels are viewed by workers as the most effective for obtaining accurate information about MSDs
- identify and develop strategies for influencing risk perceptions.

1.1 OUR APPROACH

We used a combination of methods, including quantitative and qualitative elements, to explore employee understanding of risk from the proposed scenario-based perspective. There were three main parts of the study:

- Reviewing available literature on risk perception of MSDs
- Conducting a questionnaire survey over the telephone
- Conducting focus groups.

This mixture of methods was selected (in consultation with the HSE) as a ‘broad brush’ approach to build a rich picture of the issues and explore a wider range of issues than would have been possible within the budget constraints using a single method in more detail. We conducted a brief literature review to identify factors that influence people’s risk perception of MSDs. There is a large body of literature on risk perception. Yet only a small part of this research focused on the risk perception of MSDs to worker populations, so we
2 LITERATURE REVIEW

In our literature review, we examined the current available literature for factors that are thought to influence employee risk perception in relation to MSDs. The findings of this review are contained in the section below.

2.1 SEARCH STRATEGY

We searched for articles that studied factors influencing risk perception of MSDs and factors influencing risk perception at work in general. The following terms were used:

- risk perception
- risk ranking
- musculoskeletal disorders
- back pain
- upper limb disorder (ULD) and work related upper limb disorder (WRULD)
- repetitive strain injury (RSI)

We searched the following databases:

- AMED (Allied and complementary medicine database)
- Ergonomic Abstracts Online
- the Internet – including the HSE website.

We also consulted:

- conference proceedings
- books on the topic of risk and musculoskeletal disorders.

2.2 FACTORS THAT INFLUENCE THE PERCEPTION OF RISKS

During the review we found a number of recurring themes within the literature and identified the following factors that are believed to influence risk perception.

2.2.1 Gender

The literature supported the view that the different sexes judge risks differently, with men generally perceiving lower risks than women (Finucane et al. 2000; Vredenburgh & Cohen, 1995; Leonard et al. 1990).

One reason for this may be related to vulnerability, as studies have shown that women generally perceive themselves as more vulnerable than men (Vlek & Stallen, 1979; Fischer et al. 1991) and have more dread of hazards (Savage, 1993). They may therefore be more likely than men to overestimate their likelihood of injury from a hazard and rank their risks as higher accordingly (see the quotes from the focus groups in section 5). Leonard et al. (1990) examined the perception of risk to oneself versus others and found that as a group, only the males under 30 years old ranked risks lower for themselves than others, suggesting that this group thought they were the least vulnerable and held the view ‘it couldn’t happen to me’. They found a significant overall difference for sex, but no age difference.
enlarged the search to include factors influencing risk perception at work in general. The findings of our literature review are contained in section 2.

The main part of the study involved carrying out a questionnaire survey over the telephone. Its aim was to explore the full range of factors that may influence employee risk perception in relation to MSDs and consider which information sources and media channels are viewed as the most effective for obtaining accurate information on MSDs. The questionnaire was administered to 200 respondents, divided into 50 respondents from each of the following groups:

- industry-wide from Small and Medium-sized Enterprises (SMEs)\(^1\)
- industry-wide from non-SMEs\(^2\)
- healthcare group
- construction group.

These groups were selected in consultation with the HSE as they represent industry groups which might be expected to have different perceptions of MSDs.

An overview of the telephone interviews is contained in section 3 and the findings of this survey are presented in section 5.

We then conducted four focus groups to investigate in more detail the factors that influence employee’s perception of MSD risk and to help identify strategies for altering these perceptions. Details of how the focus groups were conducted are contained in section 4 and the findings in section 5.

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\(^1\) Defined by the European Commission as independent enterprises that have fewer than 250 employees, and an annual turnover not exceeding £25 million or a balance-sheet total not exceeding £17 million.

\(^2\) Enterprises with over 250 employees and an annual turnover exceeding £25 million or a balance sheet total exceeding £17 million.
2.2.2 Experience of work

In accordance with the theory of reinforcement, exposure to high risk events which do not result in harm will tend to extinguish an individual's perception of the risk associated with the event. Several studies supported this idea, that the greater one's experience of a hazard the lower the perception of risk (Zimolong, 1985; Karnes et al. 1986; Leonard & Hill, 1989. This view was also supported by a study of risk perception in collieries, which found that experienced workers, skilled workers and supervisory staff were less aware of the hazards whilst inexperienced men rated their activities as relatively more risky (Rushworth et al. 1986).

In addition to reinforcement, there may be a habituation effect where regular exposure to a risk reduces its apparent severity. For example, the more time a person spends in a job or industry, the more familiar they should be with the risks in the work environment, and as such risk habituation may occur. This is where workers underestimate the risks from tasks they perform frequently because they become habituated to the risk and complacent about the precautions required (Ittleson, 1978; Fleming, 2002). Weyman & Kelly (1999) reviewed the literature on familiarity of risk and suggest that there is a tendency for people to underestimate familiar risks and to overestimate unfamiliar risks.

2.2.3 Personal experience of MSD

It would seem logical that accidents should alert workers to hazards in the workplace and the risk of injury. Just as experience of work without injury decreases risk perception (theory of reinforcement – Karnes et al. 1986), it would follow that experience of a job-related accident, resulting in personal injury, would increase the perception of risks.

Johnson & Tversky (1983) suggested that people who have experienced accidents themselves or witnessed accidents involving serious injury or death may increase their perception of the risks of the occupation associated with the incident. However, it is not clear how long lasting such effects might be.

2.2.4 Perceived control

The concept of control, in terms of the extent to which people feel they have autonomy and freedom in their work, was viewed as a predictor of perceived risk. The literature supported the view that the greater control an individual has over their work, the lower they perceive their risk of injury to be. (Harrell, 1990; Andries et al. 1996; Weyman & Kelly, 1999).

Harrell (1990) suggested that the linkage between control over work and perceived risk may be due to people with higher control being able to avoid hazardous features of the workplace or having the freedom to be more attentive or cautious when doing certain tasks. In contrast, colleagues with low control may have to do these tasks quickly or carelessly because their pace of work is dictated by a manager or the equipment. Suh, et al. (1997) looked at how global measures of risk perception can contribute to the outcomes of stress and MSDs. They proposed that low control and a reduced opportunity to influence a situation, would increase the likelihood of an individual having to accept the hazard they were exposed to. This might increase the risk of a person suffering psychological stress and musculoskeletal discomfort. This view was supported by Cox & Cox (1993) who found that feelings of being in control reduced stress levels, which may affect safety performance.
However, the literature also supported the view that the perception of risk by people with high control may be underestimated and illusionary. Harrell (1990) found that the greater a person’s job control, the fewer hazards they reported in the workplace. Weyman and Kelly (1999) highlighted the link between control and voluntary exposure. They suggested that people in high control jobs perceived exposure to risk to be under their own volition, which reduced their ‘dread’ of the risk and possibly caused them to rank the risks as lower. In addition, individuals with high control may recognise the hazard in the abstract but do not feel personally at risk due to a belief in their own ability to control the situation (Symes et al. 1992).

2.2.5 Personality

Differences in personality types such as risk-takers and risk-avoiders can influence attitude to risk and the level of risk people are willing to tolerate. There is a suggestion in the literature that these personality traits may affect risk perception (Young, 1986; Symes et al. 1992; Fleming, 2002), the most likely link being that people with the risk-taker trait perceive risks as lower than people who are risk-averse.

2.2.6 Level of education and/or training

There was very little literature on the effect of level of education on a person’s perception of risk. However job-related training has received more attention. There is a body of literature which focuses on risk communication, the benefits of different communication methods and the effect of job related training on risk perception, but this does not look at education level. In a study conducted by Vredenburgh & Cohen (1995) into the differences in perception among various racial and social groups, they found that level of education was not related to risk perception. However, Savage (1993) studied psychometric attitudes to risk and found that people with lower levels of schooling and income had more dread of hazards, possibly as a result of greater perceived exposure to it.

2.2.7 Type of risk

The type of risk being perceived may also alter the perception of risk. Research has shown that people consistently underestimate common risks and overestimate rare ones (Lichtenstein et al. 1978; Weyman & Kelly, 1999).

In addition, the amount of delay between the risk act and the onset of undesirable consequences affects the level of caution people apply to the risk, with reduced levels of caution applied when the consequences are far off (Bjorkman, 1984). Holmes et al. (1997) supported this finding in a study looking at employer and employee risk perception where they found that employees rated risks with an immediate injury effect as higher than those with a delayed disease effect.

2.2.8 Company culture

There was some literature on the effect of company culture on employee risk perception. Rundmo (1996), in a study of the relationship between risk perception and safety in the offshore oil industry, found that employee’s risk perception was affected by management commitment and involvement in safety promotion. Where management had been active in promoting safety, employees were more likely to be aware of risks in their environment.
Fleming (2002) suggested that decisions on taking or rejecting risks were affected in part by the safety culture of the organisation, with people who worked in organisations with a positive safety culture being more likely to reject risk taking than individuals in organisations with a poor safety culture.

**Summary of factors most likely to influence risk perception identified during literature review**

Based on this review of the relatively sparse literature which is directly relevant, we identified the following as most likely to influence risk perception:

- **Gender**: women are more likely to perceive risks as higher than men
- **Experience of work**: the longer an individual spends in a job without harm or the greater the experience with a hazard without harm the lower the perceived risk.
- **Personal experience**: experience of job-related accidents may increase the perceived risk.
- **Perceived control**: the higher the level of perceived control the lower the perceived risk.
- **Personality**: risk takers may perceive risks as lower than risk avoiders.
- **Level of education**: little effect on risk perception.
- **Type of risk**: the more common the risk the lower the risk perceived. Risks with an immediate injury effect are rated as higher than those with a delayed disease effect.
- **Company culture**: a safety culture in an organisation can increase its employee’s awareness and perception of risks.

The findings of the literature review were used to focus our subsequent investigations and to allow us to define questions to explore the full range of factors that might influence employee risk perception in relation to MSDs. The telephone questionnaire survey was designed, in part, to test out the factors which the literature identified as most likely to influence risk perceptions.
3 INTRODUCTION TO TELEPHONE INTERVIEWS

In this section, we describe how we developed and administered the telephone questionnaire survey and present an overview of the respondents.

3.1 QUESTIONNAIRE DESIGN AND ADMINISTRATION

In this section we describe how we designed and administered the questionnaire.

3.1.1 Questionnaire design

Following the literature review we devised a questionnaire which could be administered over the telephone. This was based on the information gathered in the review and our knowledge and experience of risk perception, gleaned from people who attend our training courses and participate in our consultancy and research assignments. This questionnaire was created with input from three physiotherapist-ergonomists, who provide preventative advice to organisations and specialise in the treatment of patients with work-related MSDs.

The telephone questionnaire focussed on the risk perception of two types of MSD, back pain and upper limb disorder (ULD), to identify:

- the accuracy of employee’s perceptions about the risk of experiencing back pain and ULD
- common misconceptions about the risk of experiencing back pain and ULD
- factors that influence risk perception in relation to MSDs
- which communication channels are viewed by workers as the most effective for obtaining accurate information about back pain and ULD
- information sources from which an understanding of back pain and ULD are obtained by members of the public.

The questionnaire used a combination of rating scales and open and closed questions designed to provide quantitative and qualitative data. As people are better at ‘recognition’ tasks than ‘recall’ tasks, the questionnaire used prompts where necessary to check in full the awareness of the different MSDs.

To reduce ambiguity and bias, we conducted a pilot test of the questionnaire externally with a small sample of representative respondents. Following the pilot test, a number of changes to the content and the structure of the questionnaire were made.

To avoid any order effect from asking respondents about back pain initially and then about upper limb disorder, two versions of the questionnaire were created. Both contained the same questions but differed in the order they were asked i.e. the back pain questionnaire always asked about back pain first and then upper limb disorder, the upper limb disorder questionnaire always asked about upper limb disorder first and then back pain. There was no significant difference between the data gathered from the two versions of the questionnaire.
3.1.2 Questionnaire administration

The amended questionnaire was administered over the telephone to 200 respondents. These were divided into four groups with 50 respondents per group:

- 50 respondents industry-wide from SMEs
- 50 respondents industry-wide from non-SMEs.
- 50 respondents from the healthcare group
- 50 respondents from the construction group

The participants were selected at random from organisations listed in The Personnel Manager’s Yearbook 2003/04 and individuals listed on the nursing membership lists. Approximately every twentieth company in the yearbook/nursing membership list that met the above criteria was contacted by telephone. Respondents were chosen from the lower levels of organisations. Often the person answering the phone fitted this description. If not we asked to speak to the following type of respondent from each industry group:

- SMEs & non-SMEs – respondents who had office-based jobs i.e. sales staff, accounts personnel, IT staff, personal assistants, secretaries, call centre staff etc.
- Healthcare group – respondents who worked with patients i.e. nurses, occupational therapists and physiotherapists
- Construction group – respondents who worked on site, full or part-time i.e. construction workers, architectural technicians and surveyors.

Because we were interested in lay perceptions of risk, we excluded the following people from our study:

- managers
- individuals responsible for health and safety of staff
- employees who worked in health and safety departments

Once a suitable participant was located, we explained the purpose of the HSE’s research and, if they were willing to participate, we administered the questionnaire. Each interview lasted approximately 15 minutes.

Due to the nature of the job, it was difficult for us to contact construction staff at the lower levels of organisations over the telephone. Generally these individuals were site based, often did not have access to a work telephone and were not happy to be interviewed out of work hours. For some members of this group, we altered our data collection technique slightly and administered the questionnaire to them in person during a break from work or sent them a copy of the questionnaire (with abbreviations etc. explained) for them to complete in their own time. This technique was used on a small number of participants in the construction group (less than 50%). There was no significant difference between the data gathered by these two methods and the telephone interview method.
3.2 QUESTIONNAIRE RESPONDENTS: BACKGROUND INFORMATION

On average, the majority of respondents were from the 18-30 age group (37.7%). Few respondents came from the 61+ age group (1.5%) as generally people in the higher age groups had either reached management level within a company, and were therefore excluded from the study, or had retired. Most respondents in the SMEs came from the 31-40 age group.

![Figure 1. Age of respondents in different industry groups](image)

The mix of male and female respondents was approximately equal over the entire sample. However within industry groups the majority of healthcare respondents were female and nearly all the construction workers were male. This reflects the general sex bias that can be seen at the lower levels of both industry groups.

<table>
<thead>
<tr>
<th>Industry group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>Non-SME</td>
<td>31</td>
<td>19</td>
</tr>
<tr>
<td>Healthcare</td>
<td>42</td>
<td>8</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
<td>49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>101</td>
<td>99</td>
</tr>
</tbody>
</table>

![Figure 2. Gender of respondents in different industry groups](image)

Figures 3 and 4 show that the majority of respondents had spent over 1yr – 5yrs (38.5%) in their current job and over 10 years (46.5%) in the industry.
The construction group had the largest number of respondents who had spent over 10 years in their current job and in the industry.
Respondents were read out the following statements from a script agreed with the HSE about control and workload and asked to rate them as true or false for their current job:

- Statement 1: I feel overwhelmed with my workload at work (true means low control)
- Statement 2: My workload is driven by someone else or a machine (true means low control)
- Statement 3: I have control over my workload (false means low control)

Where individuals gave the low control answer on two or more of the three questions, we classified them as low control. The remaining respondents were ranked as having high perceived job control. However, where individuals answers were contradictory e.g. ‘true’ to statement 3, and also ‘true’ to statement 1 or 2, they were excluded from the analysis on the assumption that they had misunderstood the statements. Only six respondents were excluded from the analysis.

<table>
<thead>
<tr>
<th></th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High control</td>
</tr>
<tr>
<td>SME</td>
<td>30</td>
</tr>
<tr>
<td>Non-SME</td>
<td>32</td>
</tr>
<tr>
<td>Healthcare group</td>
<td>26</td>
</tr>
<tr>
<td>Construction group</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
</tr>
</tbody>
</table>

**Figure 5. Respondents’ perceived job control in different industry groups**

As a group, the majority of respondents had high perceived job control. This was also the case within the different industry groups, except healthcare where the numbers having high and low control were approximately equal.

Even though we deliberately targeted lower level jobs in the groups, more than half the respondents had been educated to degree, HND or HNC level (63.7%). Within the construction group NVQ, City and Guilds or Apprenticeship was the most common highest level of education.
Figure 6. Highest qualification of respondents in different industry groups
4 INTRODUCTION TO FOCUS GROUPS

To explore perceptions and strategies for altering those perceptions in greater detail, we ran some focus groups. We recruited four groups of participants and held focus groups at different geographic locations around the country: Birmingham, Bournemouth, Edinburgh and London.

It was intended that eight participants attend each group and be divided into two participants from each of the following categories in order to ensure variety within each group:

- SMEs
- non-SMEs.
- healthcare group
- construction group.

We were advised by the recruitment company to over-recruit construction workers by one person per group, as these individuals are often unable to attend at the last minute due to work commitments. However, of our intended participants, only one of the construction workers did not attend. In addition, two non-SME participants (from different focus groups) cancelled on the day of the group, so the final attendance across the four groups was:

- 8 respondents industry-wide from SMEs
- 6 respondents industry-wide from non-SMEs.
- 8 respondents from the health services group
- 11 respondents from the construction group.

Attendees were from the same level within a company as for the telephone interviews. The duration of the focus groups was 90 minutes. The objectives were to:

- Determine the range of factors that influence risk perception in relation to MSDs
- Discuss proposed strategies for influencing perceptions.

Participants were asked open-ended questions designed to elicit discussion and provide qualitative and quantitative data.

Participants based their answers to focus group questions on their own perceptions and assumptions of factors that would influence other people’s perceptions of risks. In addition, the number of participants who took part in the focus groups was small (33 participants). As a result of these two factors, findings from the sessions should be handled with caution. They are useful for illustrative purposes and to support the findings of the telephone questionnaire survey, but should not be used to draw hard conclusions.
5 FINDINGS

In this section we present the results of the telephone interviews and the focus groups. Where we report percentages or proportions of respondents, we are reporting the interview data. The focus group data has been used to illustrate points with quotes or insights into the explanations behind the findings.

5.1 LAY PERCEPTIONS AND COMMON MISCONCEPTIONS ABOUT THE RISK OF EXPERIENCING MSDs

In this section, we report our findings on the understanding and perception of risk.

5.1.1 Understanding of risks

We summarise the findings for the key questions we asked in the interviews and focus groups.

Have you heard of the term musculoskeletal disorder or MSDs?

Less than half the respondents had heard of the term musculoskeletal disorder or MSDs (46.5%).

Breaking this down into industry group, the majority of people who had heard of the term MSDs came from the healthcare group (80%). The SME and non-SME groups had equal numbers of respondents who had heard of the term (38%) and the construction group had the least number of respondents who had heard of the term (30%).

A similar finding was found in the focus groups where all but one of the healthcare participants was familiar with the term MSDs and able to provide a correct definition. These individuals reported that they had learnt about the term during annual company training.

Of the remaining focus group participants, one SME participant had heard of the term as they had personal experience of MSDs, having acquired work related shoulder/neck discomfort. One construction worker also reported hearing the term although they did not have as much knowledge of the disorder as participants from the other groups, reporting that it had ‘something to do with bones and muscles’.

Which MSDs have you heard about?

To ensure that respondents had not only heard of the term MSDs, but also knew its meaning, we asked them to list the MSDs they had heard about.

Of the 46.5% of respondents who said they had heard of the term, the majority (87.1%) were able to demonstrate a correct understanding by giving an example of an MSD (40.5% of the total group of respondents). Of those respondents who did not understand the term, one thought it meant ‘motor neurone disease’ and the remaining respondents said they had heard of the term but either did not know what it was or were not sure.

The respondents who correctly understood the term MSDs, generated the following list of MSDs they had heard about and the body areas they could affect:
The number of participants who responded in this way is shown. Respondents often gave more than one answer.

The MSD that most respondents were aware of was back pain. Although 34 respondents (42%) knew that MSDs could affect the wrists, shoulders, neck and fingers, few were aware of the term upper limb disorder or WRULD. In general, respondents used the generic term RSI to refer to MSDs of the upper limb.

**Have you heard of the terms back pain and ULD?**

Most respondents had heard of the term back pain (99.5%), fewer had heard of the term upper limb disorder (85%). Within the four different industry groups only one of the construction workers had not heard of the term back pain.

For the term ULD, healthcare employees were most familiar with the term (42%), followed by non-SME’s (36%) and SMEs (28%). As with the term MSDs, Construction workers were least familiar with the term ULD (18%).

During the focus groups, we described back pain and ULD and asked participants if they were familiar with these terms. All participants were familiar with the term back pain but only one participant (non-SME) had heard of the term ULD and asked ‘is that the same as RSI?’

**What could cause back pain and ULD discomfort?**

Questionnaire respondents were given a scenario where they had a sore back or their hands felt numb and tingling at the end of a working day and were asked to conclude what could have caused this discomfort at work. It was made clear to the respondents that the answer should focus on causes of back pain and ULD in the workplace. If respondents gave causes of MSDs outside of the workplace i.e. existing problems such as injuries from car crashes, they were prompted to think about other possible work related causes. Respondents could give more than one response.

**Back pain**

Most respondents were able to provide a cause of back pain at work which we classified as ‘correct’ (93%). The most common responses to possible causes of back pain in the workplace were poor posture (both seated and standing) and manual handling (see Figure7).


<table>
<thead>
<tr>
<th>‘Correct’ responses to question about possible causes of back pain at work</th>
<th>Percentage of respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>poor posture - bending, twisting, reaching, stretching</td>
<td>33</td>
</tr>
<tr>
<td>manual handling - lifting, pulling, carrying etc</td>
<td>33</td>
</tr>
<tr>
<td>poor seated posture</td>
<td>28.5</td>
</tr>
<tr>
<td>sitting for long periods, including driving</td>
<td>12</td>
</tr>
<tr>
<td>poor chairs – unsupportive</td>
<td>11</td>
</tr>
<tr>
<td>standing for long periods</td>
<td>3</td>
</tr>
<tr>
<td>poor workstation setup i.e. screen and desk height, location of items, need to stretch etc</td>
<td>2.5</td>
</tr>
<tr>
<td>static postures – general</td>
<td>1</td>
</tr>
<tr>
<td>over-exertion</td>
<td>1</td>
</tr>
<tr>
<td>repetitive motions</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Figure 7. ‘Correct’ responses to question regarding causes of back pain at work

The most common incorrect response to possible causes of back pain in the workplace was ‘I’m not sure’ or ‘I don’t know’.

<table>
<thead>
<tr>
<th>Incorrect responses to question about possible causes of back pain at work</th>
<th>Percentage of respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>not sure</td>
<td>3.5</td>
</tr>
<tr>
<td>cold, sitting in draught, weather</td>
<td>1.5</td>
</tr>
<tr>
<td>Tiredness</td>
<td>1</td>
</tr>
<tr>
<td>illness, stiff joints</td>
<td>1</td>
</tr>
<tr>
<td>Stress</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>0.5</td>
</tr>
<tr>
<td>using mouse</td>
<td>0.5</td>
</tr>
<tr>
<td>previous injury - car accident</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Figure 8. Incorrect responses to question regarding causes of back pain at work

Although some of the responses in the table above could cause back pain they are not work specific and were therefore classed as incorrect.

**ULD**

Most respondents (69.5%) were able to provide a cause of ULD at work consistent with current opinion. The most common responses to possible causes of ULD in the workplace were long periods of repetitive motions (in general or on Display Screen Equipment), manual handling and poor workstation setup i.e. the workstation was not set up according to good ergonomics practices.
**Figure 9. ‘Correct’ responses to question regarding causes of ULD at work**

The most common response considered as incorrect to possible causes of ULD in the workplace was ‘I don’t know’ (20.5%). Other responses in the table below may cause ULD but they are not work related and were therefore classed as incorrect. Respondents who gave the ‘cold’ as a cause for their hands feeling numb and tingling were prompted for a cause of ULD related to the workplace, as although cold could have caused the symptoms described, it was unlikely to cause an ULD.

<table>
<thead>
<tr>
<th>‘Correct’ responses to question about possible causes of ULD at work</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>typing for long periods, repetitive movement on DSE - mouse and KB</td>
<td>12.5</td>
</tr>
<tr>
<td>manual handling</td>
<td>11</td>
</tr>
<tr>
<td>poor workstation setup i.e. desk or chair at incorrect position affecting position of arms and neck, cradling the phone, stretching for mouse</td>
<td>13.5</td>
</tr>
<tr>
<td>Repetitive movements – general</td>
<td>10.5</td>
</tr>
<tr>
<td>typing and working on DSE – general</td>
<td>10</td>
</tr>
<tr>
<td>static posture, gripping tools</td>
<td>6</td>
</tr>
<tr>
<td>Overuse of mouse only</td>
<td>5.5</td>
</tr>
<tr>
<td>Restricted/poor circulation – often caused by posture</td>
<td>4.5</td>
</tr>
<tr>
<td>Vibrating tools, white finger</td>
<td>2.5</td>
</tr>
<tr>
<td>poor posture i.e. awkward postures involving upper limb, leaning</td>
<td>2</td>
</tr>
<tr>
<td>dropping something on wrists</td>
<td>1</td>
</tr>
<tr>
<td>something restrictive on wrist e.g. nurses uniforms</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>‘Incorrect’ responses to question about possible causes of ULD at work</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>don't know</td>
<td>20.5</td>
</tr>
<tr>
<td>Nerves</td>
<td>6.5</td>
</tr>
<tr>
<td>Cold</td>
<td>5</td>
</tr>
<tr>
<td>illness/disease i.e. arthritis, stroke, Parkinson’s, MS, high blood pressure</td>
<td>2.5</td>
</tr>
<tr>
<td>driving, cycling</td>
<td>1.5</td>
</tr>
<tr>
<td>Stress</td>
<td>0.5</td>
</tr>
<tr>
<td>would not be work related</td>
<td>0.5</td>
</tr>
<tr>
<td>Nothing</td>
<td>0.5</td>
</tr>
<tr>
<td>Fatigue</td>
<td>0.5</td>
</tr>
<tr>
<td>working conditions</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Figure 10. ‘Incorrect’ responses to question regarding causes of ULD at work**

In total 75 out of 200 respondents gave ‘incorrect’ causes of ULD at work. Fewer respondents could correctly identify the causes of work related ULD than back pain.
5.1.2 Perception of risks

We summarise the findings for the key questions we asked in the interviews and focus groups.

*Do you think you are at risk from Back Pain or Upper Limb Disorder?*

The majority of respondents thought they were at risk from back pain or ULD. However, fewer people thought they were at risk from ULD (58%) than back pain (63.5%).

Respondents within the construction (84%) and healthcare group (73%) were most likely to perceive themselves at risk of back pain. Respondents from non-SME’s had the least number of people who thought they were at risk (38%).

![Figure 11. Perceived risk of work related back pain by industry group](image)

Respondents within the construction (68%) and healthcare groups (64%) were most likely to perceive themselves at risk of work related ULD. Respondents from non-SME’s had the least number of people who thought they were at risk (48%).

The respondents from the construction and healthcare groups may perceive themselves at higher risk of work related back pain and ULD as a result of their experience in these industries. Data on the incidence of the two types of MSD by industry from the HSE website and the Self-reported Work-related Illness survey 2001/2002 (SWI) indicated that these two industry groups have a higher incidence of MSDs than the SME and non-SME groups i.e. the nature of the job means they are at higher risk. They may therefore have better knowledge of the disorder/s as a result of personal experience, knowledge of colleagues who have had the disorder/s or training within the industry.
With the exception of non-SMEs, all respondents thought that they were more at risk from work related back pain than upper limb disorder.

**How likely is it that you will get work-related back pain or ULD?**

We asked respondents to rank how likely they thought it was that they would get work related back pain or ULD in the future from the work they did. Respondents ranked their perceptions on a 5-point scale.

<table>
<thead>
<tr>
<th></th>
<th>Back pain</th>
<th>ULD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely</td>
<td>12.5%</td>
<td>7.6%</td>
</tr>
<tr>
<td>very likely</td>
<td>21%</td>
<td>16.2%</td>
</tr>
<tr>
<td>Possible</td>
<td>29%</td>
<td>34.8%</td>
</tr>
<tr>
<td>not very likely</td>
<td>31%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Never</td>
<td>6.5%</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

**Figure 13. Perceived likelihood of work related back pain or ULD**

Overall, respondents thought their likelihood of getting back pain was greater than their likelihood of getting a ULD. About a third thought they would definitely or very likely get back pain compared with about a quarter who thought they would definitely or very likely get a ULD.

In order to compare across industry groups, we have compared responses in the ‘definitely’ and ‘very likely’ category (higher risk) with responses in the ‘not very likely’ and ‘never’ categories (lower risk).

As shown in Figure 14, on average, respondents in the construction group perceive the highest risk of back pain followed by respondents in the healthcare group. On average, SME’s and non-SME’s perceive their risk of back pain as being low.
Data on the incidence of the two types of MSD by industry from the HSE website and the Self-reported Work-related Illness survey 2001/2002 (SWI) indicate that employees in the construction and healthcare groups have the highest incidence of back pain. The perceptions of the respondents were therefore consistent with current findings. They also perceived themselves to be more at risk of ULDs than the other groups but less than for back pain.

Figure 15 suggests that non-SME respondents perceived themselves to be least at risk from ULD whereas SME respondents perceived themselves to be more at risk from ULD than back pain. However, these differences between the groups are not large.
Figure 15. Perceived likelihood of work related ULD by industry group

Across all groups, people perceived themselves to be less at risk from ULD than back pain. The data on base-line incidence of MSDs supports this perception.

How accurate is the perceived likelihood of MSD risks?

We asked respondents to rank certain events in order of the most to least likely of happening in their industry. In order to assess how accurate their perceptions were, we compared the overall ranking for each industry group with the base-line data (described above) on the incidence of the risks. This data (combined with consultation with HSE) resulted in the following within industry group order of likelihood of injury (from most to least likely):

**SME & Non-SME**
1. Slips and trips
2. Back pain
3. ULD
4. Stress
5. Assault and violence

**Healthcare**
1. Back pain
2. ULD
3. Slips and trips
4. Assault and violence
5. Being struck by something sharp i.e. needle sticks
Construction
1. Back pain
2. ULD
3. Slips and trips
4. Crushed by falling object
5. Falls from height

Figure 16 shows that SME respondents as a group, appear to have overestimated the risk of stress as 54% of respondents thought it was the most likely thing to occur in their industry. However, their ranking of the other risks is broadly in line with HSE evidence. They have ranked the risk of back pain and ULD as third and fourth ‘most likely’ to occur respectively after slips and trips. However this data is particularly difficult to interpret and we do not wish to overstate these findings.

Figure 17 shows that similar to SMEs, non-SME respondents as a group, overestimated the risk of stress as 68% of respondents thought it was the most likely issue to occur in their industry. However, their ranking of the other risks is broadly in line with the HSE evidence.
Figure 17. Non-SME respondents’ rankings of perceived work related risks

Healthcare respondents as a group correctly ranked the risks of MSDs as they ranked the risk of back pain and ULD most and second most likely to occur, before slips and trips which is the third most likely (see Figure 18).

Figure 18. Healthcare group respondents’ rankings of perceived work related risks
Figure 19 shows that construction respondents as a group, overestimated the risk of slips and trips as 47% of respondents thought it was the most likely thing to occur in their industry, along with back pain. However, their ranking for back pain risks was correct as they ranked their risk of back pain as most likely. However as a group they underestimated the risk of ULD as it is the third most likely to occur after slips and trips.

![Construction group respondents’ rankings of perceived work related risks](image)

**Figure 19.** Construction group respondents’ rankings of perceived work related risks

**Summary of the understanding of MSD risks**

- Less than half of the respondents had heard of the term MSD.
- Only 40% of respondents had heard of the term MSD and knew the correct definition.
- Of respondents who knew the correct definition of MSDs (40% - 81 respondents), half (41 respondents) knew that MSDs could affect the back.
- Very few respondents used the term ULD to refer to the neck, shoulder and arm area.
- RSI was the third most popular response regarding an understanding of MSD.
- Fewer respondents had heard of the term ULD than back pain.
- Respondents within the healthcare group were most likely to have heard of the term ULD. Construction workers were least likely.
- Fewer respondents could correctly identify a cause of work related ULD than a cause of work related back pain.
- More respondents perceived themselves to be at risk from back pain than ULD.
- People in the healthcare and construction groups perceived themselves as most at risk from back pain and ULD.
- Employees in the construction and healthcare groups have the highest incidence of back pain so, on average, their perceptions of back pain are ‘correct’.
- Overall people perceive themselves to be less at risk from ULD than back pain. The data on base-line incidence of MSDs supports this finding.
Respondents within the different industry groups ranked their risk of MSDs as broadly correct, with the exception of construction respondents who underestimated their risks of ULD.

5.2 FACTORS THAT INFLUENCE RISK PERCEPTION IN RELATION TO MSDs

In this section, we report our findings from the focus groups and the telephone survey on the factors that influenced the perception of risk.

5.2.1 Focus Group - Factors that influence risk perception

During the focus groups we asked the participants for factors they felt influenced their and other people’s perceptions of MSDs at work. They produced the following list of factors:

**Age**

In general, participants thought that younger people perceived risks as lower than older people. Their responses included:

- ‘The young are naïve so they rate risks as lower. (They) think they’re invincible and may be trying to impress others in the job, trying to be good in the job because they have just started’

- ‘when you’re young you rate risks as lower because you think you can do anything’

- ‘as you get older you see risks as higher’

**Personal experience of MSDs**

Participants thought that personal experience of the disorder would cause individuals to rank risks as higher. This was especially true for the construction group where several participants said they didn’t wear equipment or take the proper precautions until they had experienced an injury themselves.

Two construction workers who attended the focus groups arrived with broken bones (hand and wrist) caused by accidents at work. One of these participants commented:

- ‘until it happens to you, you don’t see the risk, I know our job’s dangerous – it’s high risk-but until I broke my hand I didn’t know it could happen. I mean I saw other people get hurt so I knew it could, but I didn’t think it would happen to me. Now I know.’

Personal experience also affected those working in the office. One SME participant commented:

- ‘You don’t think you can get hurt working at your computer. You are not lifting or things like that and people talk about bad backs but you don’t think they got them from work. But after hurting my shoulder I now know what the risks are’
Knowing other people who have experienced MSDs

Participants believed that knowing someone at work who had experienced MSDs would increase people’s perception of the risk. They commented that other people’s injuries alerted them to the risks and helped them learn how to avoid injury:

‘if someone has a sore wrist at work everyone does – it’s like an epidemic – it’s contagious….we have to fill in incident forms and there’s a report. You know the things to avoid doing because they’re documented’

‘you learn from others’

People’s physical health

Individuals who were less healthy would perceive risks as higher. Some participants thought that if someone perceived themselves as unhealthy they would think they were more vulnerable to the hazard and therefore perceived the risks to be higher. A typical comment was:

‘.. if someone is overweight … and doesn’t go to the gym they will think they are at higher risk. It’s not the same as personal experience because you don’t have an injury from work’

They also commented that people who were more vulnerable, such as pregnant women, would perceive their risks as higher than non-pregnant women.

Experience of work

Most participants thought that if an individual had spent a long time in a job and not encountered any injuries etc, then they would perceive their risks as lower, for similar reasons as discussed in the literature review: familiarity and reinforcement theory.

However a few participants thought time on the job would increase risk perception as they did not look at experience of work in isolation:

‘When you’ve been in the job a long time you would have had more training and seen more people get injured so you might rate the risks as higher’

Gender

All participants thought that women would perceive higher risks than men:

‘females rate risks higher, we’re more cautious. Men just rush in’

‘women see risks as being higher than men because they think about things’

Education & Training

Training on the job was viewed as an important factor in people’s perceptions of risks. Focus group participants did not think education level per se had an effect on perception unless the qualification was in a relevant subject, however, they were all in agreement that the amount of relevant health and safety training or information you had read, would alter your perceptions.
Participants suggested that your perceptions would then be accurate and that your perceived risk level would be equal to the actual risk level.

‘In healthcare we all get training so it would plateau (the effect of other factors). Age would not have an effect. Our perceptions of risks are accurate so we’re all equal… Our training’s statutory and mandatory’

‘We have excellent health and safety officers. They make you more aware. If the Health and Safety people take an interest in you then you take more of an interest in yourself’

**Personality**

Participants thought that personality would affect perception. They suggested that some people were more cautious than others and they would perceive risks as higher whilst some people naturally have a more ‘…complacent attitude…’ and these individuals would perceive their risks as lower.

The construction participants commented that generally people in their industry fitted into the category of more risk taking behaviour. Healthcare participants thought they were more risk averse.

**Culture of company**

The culture of the company was proposed by some participants as a factor which influenced risk perception. Participants suggested that a company where there was an awareness of health and safety in the company culture would promote accurate or higher risk perception.

In addition other company cultures could affect risk perception. Healthcare workers commented about their industry:

‘with us there is a guilt culture about taking time off work because of short staffing levels. You have to think about colleagues so you rank risks as higher. You don’t want to injure yourself at work.’

Once participants had produced a list of factors they thought influenced risk perception they were asked to choose the factor which they thought had the most influence on their perception of risks of MSDs at work.

The majority of participants chose ‘education & training’ as the factors which most influenced their perception of MSDs at work. The literature review and the discussions during the focus group suggest that academic education is not likely to have an influence on the perception of risk and that education & training was considered by the participant to refer to on the job training. Personal experience was also a popular choice.
All the healthcare participants chose training as the greatest influence on their risk perceptions as they all received mandatory yearly training and felt this was invaluable at helping them decide risk levels at work. This factor was also popular with SMEs and non-SMEs who talked about receiving induction training and training on how to set up their workstation.

For construction workers personal experience was the most influential factor followed by experience of work. There was the general feeling in construction that, although the on-site environment and tasks conducted were often medium/high risk, injuries happened to other people. It was only when the individual experienced an injury that they began to perceive the actual risk levels. A number of SME participants also chose personal experience.

Several construction workers commented that a construction worker injured at work would be the best person to influence/train other workers in the industry. A typical comment included:

'Someone with personal experience of MSD’s should give the training it would be better if the injury was visual and the trainer must be on the same ‘wavelength’ as the trainees, for example same age.'

### 5.2.2 Telephone questionnaire - Factors that influence risk perception

The literature review identified a number of factors which may influence risk perception in relation to MSDs. The telephone questionnaire was designed to investigate the effect of a number of these factors, in addition to the possible effects of age and industry group on risk perception of MSDs.

The two factors in the questionnaire that were identified as most influencing MSD risk perception were:

- personal experience of MSDs
- type of industry group.

The remaining factors:

- age
- gender
- experience of work – time in job and industry
- perceived job control, and
- level of education

did not appear to have an effect on respondent’s perception of MSD risks.
**Personal experience of MSDs**

During the telephone interview, respondents were asked if they had experienced aches or pains in the neck, shoulder, arms or wrists. We looked at the risk perceptions of respondents who had experienced MSDs themselves and people who had no personal experience of MSDs.

We found that respondents who had personal experience of back pain were more likely to think they were at risk from work-related back pain (71.6%) than respondents with no experience of the disorder (52.4%). This was also true for respondents with personal experience of ULD, who were more likely to think they were at risk of work-related ULD (68.8%) than respondents with no experience of ULD (50.8%) – see Figure 21.

![Figure 21. Perceived risk of work related back pain and ULD for people with and without experience of these MSDs](image)

**Personal experience of the specific disorder**

We asked respondents to rank how likely they thought it was that they would get back pain or ULD in the future from the work they did. Respondents ranked their perceptions on a 5-point scale.

Figure 22 shows that respondents with personal experience of back pain perceived themselves as more likely to experience work-related back pain in the future than respondents with no personal experience of back pain. They gave more high perceptions of risk ‘definitely’ and ‘very likely’ scores than low perceptions of risk ‘not very likely’ and ‘never’ scores.
The same pattern was found for respondents with personal experience of ULD (see Figure 23). These individuals perceived themselves to be more likely to experience work related ULD in the future, than respondents with no personal experience of the disorder.

We asked respondents to rank the severity of any back pain they perceived they might experience, on a scale that ranged from 0 = the pain comes and goes and is very mild to 5 = the pain is severe and does not vary much. As shown in Figure 24 respondents with personal experience of back pain perceived any future back pain to be more severe than respondents with no experience of back pain.
Respondents with personal experience of ULD did not perceive future ULDs to be any more severe than respondents with no experience of ULD.

**Personal experience of a MSD in general**

We also looked at the effect that personal experience of MSDs in general would have on the risk perception of specific MSDs (see Figure 25). We found that respondents who had personal experience of back pain were more likely to think they were at risk from work related ULD (63.8%) than respondents with no experience of an MSD (50%). The same was true for respondents with personal experience of ULD who perceived themselves to be more at risk from back pain (67.5%) than respondents with no experience of an MSD (60.8%).

However, in both cases the difference between the two perceptions was less than for respondents with personal experience of the specific MSD.
Figure 25. Perceived risk of work related ULD for people with and without experience of back pain.

**Type of industry group**

As we discussed in section 5.1.2, industry group had a significant effect on the risk perception of work related back pain. The construction group had the largest number of respondents who rated themselves at high risk, followed by the healthcare group. SMEs and non-SMEs had the lowest perceived risk of back pain. Healthcare and construction respondents also perceived a greater likelihood of experiencing ULD.

We asked respondents to rank the severity of any back pain and ULD they perceived they might experience on a discomfort scale.

Figure 26 shows that respondents from the construction and healthcare group perceived any future back pain to be of greater severity than respondents in the SME and non-SME groups.

The construction group had the largest number of respondents who thought they would experience ‘severe’ discomfort (3% of total), while the healthcare group had the largest number of respondents who thought they would experience ‘moderate’ discomfort (15% of total). On average respondents thought any future back pain would be mild or moderate pain – comes and goes (32.5%).
As we found for back pain, Figure 27 shows that respondents in the construction and healthcare group perceived any future ULD to be of greater severity than respondents in the SME and non-SME groups.

The construction group had the largest number of respondents who thought they would experience ‘severe’ discomfort from a ULD, while the healthcare group had the largest number of respondents who thought they would experience ‘moderate’ discomfort.
Summary of the factors which influence risk perception

- The list of factors the focus group participants thought influenced risk perception of MSDs was similar to the factors gathered in the literature review. In addition, focus group participants thought age, knowledge of other people’s experience of MSDs and people’s physical health could all have an effect on people’s perceptions.
- From the telephone interviews, we observed that the only factors to influence risk perception of MSDs were personal experience of a specific MSD and respondent’s industry group.
- Respondents with personal experience of a specific MSD perceived higher risk of experiencing the specific disorder.
- Respondents with personal experience of back pain were more likely to rate future back pain as being of a higher severity.
- Respondents from the construction and healthcare group perceive higher risks of back pain than respondents in the SME and non-SME groups.
- Respondents from the construction and healthcare group perceived any future back pain and ULD to be of greater severity than respondents in the SME and non-SME groups.

5.3 INFORMATION SOURCES USED BY MEMBERS OF THE WORKING PUBLIC TO UNDERSTAND MSDs AT WORK

During the telephone questionnaire, we asked those respondents who had heard of back pain (i.e. 99.5% of sample) or ULD (i.e. 85% of sample) where they had heard about the risks of these MSDs. We read out a list of possible sources to help them recall where they had obtained the information.

At the start of the telephone questionnaire and focus groups, respondents were informed by the administrator that the project was being conducted on behalf of the HSE. This information is likely to have biased their response. To reduce this bias, respondents were told that their name and the name of their organisation would not be given to the HSE or presented in the final report. In addition they were informed that the questionnaire/focus group administrator worked for an independent consultancy not connected with the HSE.

Respondent’s anonymity and the independence of the administrator should have gone some way to reduce the respondent’s bias and indeed both positive and negative comments, concerning the HSE, were voiced by respondents. However, it should be acknowledged that some respondent bias may have occurred. In the future it may be better not to disclose the HSE as the commissioning client at any stage during the project.

5.3.1 Sources of information

Back pain
Over half the respondents recalled accessing information on back pain from the following sources:

- Word of mouth (91.8%)
- Television (66.3%)
- Company Sources (63.8%)
Word of mouth was clearly the most common source of information on work related back pain. Respondents commented that they received such information from colleagues, family members, friends and partners.

The least common sources of back pain information were charities (7.1%) followed by other training media e.g. computer based training courses (9.7%) and pharmaceutical companies (12.2%).

The HSE was identified by 48% of respondents, it was the ninth most common source. The term HSE was used to refer to HSE publications, websites, infoline, posters, booklets and face to face dealings e.g. HSE inspectors. These examples were presented to respondents.

ULD
Over half the respondents recalled accessing information on ULD from the following sources:

- Word of mouth (82.4%)
- Newspaper (64.7%)
- Training course (60.3%)
- Company Sources (58.8%)
- Magazines (54.4)
- Television (52.9%)
- HSE (51.5%)

The least common sources of ULD information were pharmaceutical companies (8.8%), followed by charities (10.3%) and other training media (13.2%).

The most and least common sources of information on ULD were similar to the most and least common sources of information on back pain.

5.3.2 Sources ranked by industry group

Back pain
There were differences between the back pain sources most commonly accessed by respondents from different industry groups (See Figure 28)

With the exception of healthcare the most common sources for information on back pain were word of mouth and television.

For respondents in the healthcare group, training courses were the most popular way for them to learn about the risks of back pain (98% of respondents). This compares to only 60.4% of construction workers, 47.9% of SME respondents and 46% of non-SME respondents. This is not surprising. From the focus groups, most nurses said they attended annually updated training in which they discuss back pain risks. Word of mouth was their second most common source of information (90%).
The healthcare group also differed from other industries in that they rated academic articles as the third most common source of back pain information with 80% of respondents accessing back pain from this source. This compared to only 20% of non-SME, 14.6% of SME and 4.2% of construction respondents.

The other interesting difference between groups was that healthcare and construction respondents accessed back pain information from Trade Unions/Associations more often than SME and non-SMEs. It is possible that this is due to increased membership rates among these groups or healthcare and construction Trade Unions/Associations who are more proactive at presenting MSD information to members.

The results also showed that, on average, more healthcare group respondents accessed each of the sources than respondents from other industries. All the listed sources for information were used to obtain information on back pain.

### ULD

There were differences between the ULD sources most commonly accessed by respondents from different industry groups (See Figure 29).

For SME and non-SME respondents the most common source to access was word of mouth, however, as for back pain, healthcare respondents most commonly accessed ULD information from training courses (76.2%). In addition, the most common source of information on ULD for respondents in the construction group was the HSE (85.7%) compared to 52.4% in the healthcare group, 55.6% of SME respondents and 36.4% of non-SME respondents.

Word of mouth was the second most common source of information for respondents in the healthcare and construction groups.

As for back pain, academic articles were a very common source of information in the healthcare group (61.9%), compared to the non-SME (22.7%) SME (5.6%) and construction groups (0%).

Pharmaceutical companies were amongst the most uncommon sources accessed for information on ULD for all industry groups with the exception of SME respondents (22.2%). The most uncommon source of ULD information for SME respondents was charities (0%).

Unlike back pain, not all the sources were accessed by respondents in different industries. The construction group respondents did not receive information on ULD from personal injury firms, academic articles, pharmaceutical companies or charities. SMEs respondents had also not received ULD information from charities. Fewer sources were accessed for ULD than back pain.
Figure 28. Ranked list of information sources where respondents received information of back pain
Figure 29. Ranked list of information sources where respondents received information of ULD
5.3.3 Most trustworthy source

Respondents were asked to choose the source they would trust most to provide them with correct information on back pain and ULD, from the sources they had reported using.

**Back pain**

As seen in Figure 30, on average, respondents chose ‘Doctors, therapists, clinics, private healthcare providers’ as the most trustworthy source of information (23.8%).

![Figure 30. Back pain sources people would trust the most](image)

The most common reasons for this choice were that:

* people within these professions were expected to have qualifications and training so they would be more likely to have the correct information on MSDs, as it was part of their job
* the information they provided was more likely to be up-to-date
* respondents with personal experience of back pain had been helped by this source in the past. This affirmed their feelings of trust in these individuals.

The following comments are typical of respondents’ responses:

(Unless otherwise stated all the comments are made with regards to doctors).

*I had back pain and he (the doctor) was knowledgeable*’

*I presume they have the most up-to-date information*’

‘Physiotherapists, doctors – I feel they are well informed with hopefully correct medical information and have a greater knowledge of the different types of back pain’
‘I hope they know what they are talking about – they are the experts’

‘they have to be up to date on the newest legislation’

‘should hopefully be on top of everything, constantly learning’

‘should be their job’

‘GP and osteopath - trained in it’

‘she (doctor) has all the facts - trained in it’

‘professional, will know about it, authoritative voice’

‘osteopath - helped it (back pain) - fixed it, go on results’

‘osteopath - personal experience’

‘therapists - dealing on one to one basis - build up a knowledge of you and don't try to sell you stuff - other appointments etc. They survive on results assume they are knowledgeable as they have a qualification’

The HSE was, on average, the second most trustworthy choice (17.6%). The most common reasons respondents gave for choosing this source were that:

• the purpose of the HSE was to provide trustworthy information on health and safety, it was their job
• failure to provide trustworthy information could result in liability, so they thought the HSE would be most likely to provide trustworthy information as a result
• the information they imparted was based on sound research
• they did not have anything to gain from providing false information.

The following comments are typical of respondents’ responses:

‘most accurate, more official, main role’

‘they must follow the legal angle, they have to keep up-to-date for fear of being sued’

‘they are a government body - believe them because they provide you with the H&S regulations’

‘they don't have anything to gain’

‘generally speaking they are qualified to write the information’

‘have to be correct, if wrong land in trouble’

‘they have to get it right - liable if don't’

‘have to cover themselves, mandatory’

‘based on sound evidence and statistics’
'up to date, reliable evidence-based information'

'don't have a vested interest'

'because they are a non-profit making organisation. Also they are more likely to have expert advisers'

'独立的'

'government body, no profit motive'

'government organisation - not an interest to give false information'

'they should be trustworthy it's their profession'

'they are the source of all true information'

'lot of research'

Training courses were on average, the third most trusted source followed by company sources.

As shown in Figure 31, within the four groups, the sources respondents viewed as the most trustworthy were ‘doctors, therapists, clinics, private healthcare providers’ and the HSE, with the exception of healthcare respondents who thought training courses and academic articles were the most trustworthy (30% each source), followed by the HSE (16%). Healthcare respondents did not choose ‘doctors, therapists, clinics and private healthcare providers’ as the most trustworthy source (2%).

Respondents could only choose one information source as the most trustworthy. Healthcare respondents described receiving yearly training which included information on MSDs (back pain and ULD) and gave them practical advice on how to avoid such injuries at work. They all found this training very useful. The finding above does not imply that that healthcare respondents thought ‘doctors, therapists, clinics and private healthcare providers’ were less trustworthy, but rather that they viewed their training course as the most trustworthy source of those they had identified.
Figure 31. Back pain sources respondents viewed as the most trustworthy

ULD
As shown in Figure 32, most respondents chose the HSE as the most trustworthy source of ULD (29.2%) followed by ‘doctors, therapists, clinics and private healthcare providers’ (20%). The two most trustworthy sources were the same as for back pain but their order was reversed.

The reasons for choosing these sources and the comments made by participants were the same as for back pain.
As shown in Figure 33, within the different industry groups, the two most trustworthy sources of information differed for healthcare respondents who chose training courses (30%) as the most trustworthy source. These respondents also chose academic articles as the third most trustworthy source (20%). ‘Doctors, therapists, clinics and private healthcare providers’ were chosen by only 5% of healthcare respondents. The trustworthiness of sources of ULD information was similar to back pain.

SME respondents chose word of mouth as their third most trustworthy source (15%), although on average it is the most common untrustworthy source of ULD (see Figure 36).
5.3.4 Least trustworthy source

**Back pain**
On average word of mouth (25.5%) and television (20.7%) were chosen as the least trustworthy ways to receive information (see Figure 34).
The most common reasons for choosing word of mouth as the least trustworthy source were:

- people often exaggerate information or don’t tell the truth
- other people’s experiences of MSDs may be different and therefore the information may not be relevant to an individual’s discomfort

The following comments are typical of respondents’ responses

‘tends to get distorted or just certain specific aspects remembered/recalled’

‘lots of people have opinions not well up on the subject’

‘people tend to exaggerate, or be wrong’

‘exaggerations’

‘stories get distorted’

‘People tend to exaggerate their experiences and go through many different things when suffering from identical problems’

‘not good idea to take advice on pain from people - may not be same as your pain’

‘people distort things’

‘people tell different stories- don’t remember things read exactly - forget - give bogus information’

‘stories get twisted’

‘embroider the truth’

‘Chinese whispers - may not be true’

‘misquote facts –exaggeration’

‘Chinese whispers, unreliable, facts can be changed’

‘don't know how true the information is - everyone is different’

‘often speculative and ill informed opinion’

The most common reason for choosing television as the least trustworthy source was the biased and often unreliable nature of the source. Respondents thought that some television programmes did not present all the facts or distorted these to support their view. They also thought that television advertising had ulterior motives and that their primary aim was to sell products and not to give trustworthy information. More respondents chose TV as the least trustworthy source compared to radio because fewer people initially chose radio as a source of information on MSDs.
The following comments are typical of respondents’ responses:

‘biased towards product’

‘just trying to sell a product’

‘adverts have an ulterior motive to get you to buy the product. Therefore certain ‘facts’ may not be true or overemphasized’

‘take adverts with a pinch of salt - trying to make money’

‘slant on documentaries – subjective’

‘trying to sell you things, distrust TV advertising’

‘journalistic standards on some documents are low - whatever makes a good programme’

‘isn't well researched’

‘own agenda’

‘try to twist things and facts – biased’

‘not based on evidence, not medically correct’

‘often poor quality information’

‘adverts - they have an interest in selling product and not in the customer’

‘short time slot - can't get all facts across only summary, dangerously misleading’

The least trustworthy sources of information were similar within the different industry groups – see Figure 35.
Figure 35. Back pain sources respondents viewed as the least trustworthy

**ULD**

The least trustworthy ways to receive information were the same as for back pain with word of mouth (28.8%) and television (19.7%) being the most common choices.

The reasons for choosing these sources and the comments made by participants were the same as for back pain – see Figure 36.

Figure 36. ULD source people would trust the least
The least trustworthy sources of information were similar within the different industry groups.

![Bar chart showing the least trustworthy sources of information](image)

**Figure 37. ULD sources respondents viewed as the least trustworthy**

The trustworthiness of sources of ULD information was similar to back pain.

### 5.3.5 Focus group trustworthy and least trustworthy sources

Participants in the focus group chose similar trustworthy and untrustworthy sources as for the telephone interviews, with the exception of the ‘doctors, therapists, clinics, private healthcare providers’ information source which was not the most popular trustworthy source.

The HSE, company sources and training courses were all commonly selected as trustworthy sources. Participants’ comments on the trustworthiness of the HSE and training courses were similar as for the telephone interviews. ‘Doctors, therapists, clinics, private healthcare providers’ were the fourth most trustworthy source. These choices were made by participants in their industry groups i.e. construction, SME etc, so although this finding is different from the telephone survey very little can be deduced from it as it is based on a very small sample of 16 groups.

Focus group participants thought company sources would be trustworthy because:

- there is a mutual interest in keeping injuries low
- health and safety staff should be qualified to provide information
- failure to provide the correct information could result in companies being sued.
They commented:

‘I would expect them (companies) to give you decent information because an employee’s comfort and health should be top priority, they legally have to look after you, otherwise you can sue’

Word of mouth, personal injury firms and newspapers were commonly selected as untrustworthy. Participants’ comments on the trustworthiness of word of mouth were similar as for the telephone interviews.

Focus group participants thought personal injury firms were untrustworthy because they had an ulterior motive to make money out of MSDs and would therefore not provide accurate information. Participants commented:

‘They are more interested in getting money than highlighting the problem. They are ambulance chasers, they just want the money, they don’t care about you’

The most common reason for choosing newspapers was that they were untrustworthy because they were often biased and stories were often not well-researched:

‘they are not trustworthy, especially the tabloids, they sensationalise the subject to convince people to sue companies. They also put a slant on it to sell papers’

‘it depends who writes the articles or adverts but often journalists are not qualified to write the information and misquote other sources to make the article sound more exciting. You can’t trust them’

Summary

– On average the most common source of back pain and ULD information was word of mouth.
– Charities and pharmaceutical companies were the least common ways to receive information on back pain and ULD.
– On average fewer respondents accessed each information source as often for ULDs as they did for back pain.
– Within industries there were differences in the way the participants most commonly accessed information.
– Training courses were the most common way for healthcare respondents to source information on back pain and ULD and most respondents chose this as the most trustworthy source.
– Healthcare respondents also accessed back pain and ULD information from academic articles more than any other industry group.
– The HSE was the most common way for construction respondents to access information on ULD.
– All industry groups accessed all the listed sources for information on back pain. They did not access all the sources of information on ULD.
– ‘doctors, therapists, clinics, private healthcare providers’ and the HSE were the most trustworthy sources of information on back pain and ULD, with the exception of the healthcare group (who rated training courses as the most trustworthy source).
– Within industries there was a difference in the choice of the most trustworthy source, with the healthcare group respondents choosing training courses and academic articles as the most trustworthy sources of information.
The least trustworthy way to receive information on back pain and ULD was word of mouth.
The least trustworthy sources of information were similar within the different industry groups.

5.4 COMMUNICATION CHANNELS THAT ARE VIEWED BY WORKERS AS THE MOST EFFECTIVE FOR OBTAINING ACCURATE INFORMATION ABOUT MSDs

Questionnaire respondents were provided with a list of different media by which they could receive information on back pain and ULD. They were asked to pick the medium by which they would most and least like to receive such information.

5.4.1 Back pain - Most effective medium

On average, most respondents reported that they would like to receive back pain information through training (29.5%) or face to face (27%) from someone they trusted to provide correct information. Print and the Internet/Intranet were also popular choices with a slight preference for the former.

Figure 38. Way respondents would most like to receive information on work related back pain
**Training**

The most popular reasons for choosing the medium training were:

- respondents would pay attention because they would have set aside time to go to the training and were therefore prepared to learn about the topic
- there existed the opportunity to learn from other participants on the course
- the communication would be practical, visual and interactive i.e. they would be able to ask questions.

The following quotes are typical of their responses:

‘very busy - force you to sit down and address issue, undivided attention’

‘can learn from each other’

‘good for immediate information- geared up to a particular thing- timeout session is best way’

‘pay more attention because in room, chosen to go - interested in subject, that is why are there’

‘have to be there for it’

‘more comprehensive - specific to location and company, less of lecture than one to one’

‘more people, more interactive’

‘Allows participation of the group, lets you express options and discuss matters as well as ask questions’

‘more official, more about where you work, have to do it’

‘have to do it, can ask questions’

‘because they are legally obliged, so we know information would be up-to-date and accurate’

‘with someone who is knowledgeable and there are opportunities to ask questions and also opportunities to ask others in the group - discuss topics and get ideas from other people’

‘familiar setting, get other people’s opinions’

‘relaxed but structured way, less intimidating’

‘physically shown how to do things properly, try things out’

‘can talk to others, open discussion’

‘get it over and done with and you can ask question if you want. Practical demos’

‘you can ask about things you don’t understand, less intimidating in a group’

‘because it can be interactive. Different people have different ideas. Different viewpoints and can ask questions.’
‘instructive and interactive’

‘everyone's there together, can share experiences’

**Face to face**

The most popular reasons for choosing the medium face to face were that:

- respondents were more likely to pay attention if a person was talking to them one to one
- the information provided would be personalized to their situation.
- as for training, the communication would be visual and interactive - they would be able to ask questions.

The following quotes are typical of their responses:

‘can ask questions and get one to one contact’

‘you will listen to a person’

‘not all built same - find out information specific to you – personal’

‘no choice to get out of learning info’

‘not a group situation - person knows about you and symptoms - specific advice for you’

‘personal - customized advise - specific to your problem’

‘gets rid of distractions’

‘take more notice - have opportunity to ask questions and get answers ’

‘easier to learn face to face, can ask questions and respond. Will give person, full attention’

‘much more personal - see how receive information, how interpret it, act on it. It is cost ineffective but get through to people better’

‘information is better absorbed’

‘question and answers plus demos. Bring up issues as you go along’

‘interactive, questioning’

‘quite personal and sincere. I would take it seriously because someone had taken time to come and speak to me’

‘focus on subject, opportunities for questions and immediate feedback and clarification’

‘brought to attention - personal, it's the way new topics of H&S are currently talked about in my co.’
**Industry group – Top 3 preferred media**

The different industry groups were in agreement that the two best ways to receive information on back pain was through training followed by the face to face medium.

![Bar chart showing the preferred media for different industry groups](chart.png)

**Figure 39. Way different industry group respondents would most like to receive information on work related back pain**

However they differed on their third most preferred medium. Print was the third most popular medium and both SMEs and construction respondents chose this as their third preferred information medium. However non-SMEs and healthcare respondents chose the Internet/Intranet as their third choice. These preferences may reflect differences in ease of access to the Internet/Intranet and familiarity with its use. See the discussion below regarding construction workers and computer usage.

None of the respondents in the healthcare group chose print as a preferred source and 22% of respondents chose it as the least preferred way to receive information on back pain (See Figure 42). Print was chosen above all other media as the least preferred way for healthcare respondents to receive back pain information. The most common reason healthcare respondents gave for their dislike of printed information on back pain was that they did not have time to read it. As one respondent said:

‘people don’t have time and don’t want to (read printed information) unless given allocated time to read’.

Discussions with healthcare employees during the focus groups revealed that they were very busy during the day and would not read paperwork unless it was essential. If they were presented with information about back pain in print form they would have to read it in their free time which they did not want to do.

Figure 28 showed that healthcare respondents commonly accessed back pain information from academic articles (third most common source). This information source is printed material. This apparent contradiction in their preference and their actual practices may be as a result of
the obligatory nature of the reading material and when these materials were read i.e. the academic articles the healthcare respondents reported accessing were most commonly found in the nursing magazines they received. Contrary to paperwork received at work, healthcare respondents were not required to read these magazines by their employer, rather they reported that they read them in their own free time for interest and enjoyment. They were happy to do this but did not want to spend their time reading obligatory employee-provided information.

Industry wide, the Internet/Intranet was the fourth most popular medium, however none of the construction workers chose this as a preferred source and 19% of construction respondents chose the Internet/Intranet as the worst way to receive information on back pain. Internet/Intranet ranked as the second least preferred way for construction respondents to receive information on back pain (see Figure 42).

The most common reason construction workers gave for disliking the Internet was that they didn’t use it. Most construction employees who work on site do not have access to the Internet during working hours and not everyone has access to the Internet at home. Discussions with construction employees during the focus groups revealed that they were only able to access the Internet at home and would not want to access work related information in their own time. One respondent said:

‘I don’t have access to the Internet on site and when I get home the last thing I want to do is to go online and read about back pain. I’m tired and want to spend some time relaxing.’

Non-SME respondents more frequently chose the Internet/Intranet as a preferred medium (third most popular) and print less frequently (fourth most popular) than SME respondents who favoured print (third most popular) over the Internet/Intranet (four most popular). These preferences may reflect differences in ease of access to the Internet/Intranet and familiarity with its use or available time to read MSD information in a printed form. However the small sample size and marginal difference between the two group preferences make it difficult to draw strong conclusions from these findings.

5.4.2 ULD - Most effective medium

The rank order of preferred media for receiving ULD was exactly the same as for back pain. Most respondents reported that they would like to receive ULD information through training (40.4%) or face to face (24.7%). Print (10%) and the Internet/Intranet (6.5%) were the next two most popular choices.

The reasons respondents gave for choosing the preferred ULD media was the same as for back pain. When respondents completing the questionnaire were asked for the second time their preferred way to receive information, most respondents reported that they would not distinguish between the information media for ULD and back pain. Most respondents reported that they would like to receive information on both MSDs in the same way, citing the same reasons for their media of choice.

**Industry wide**

As for back pain, the different industry groups were in agreement that the two ways they would prefer to receive information on ULD were through training followed by the face to face medium.
As for back pain, healthcare respondents differed on their third most preferred medium, choosing the Internet instead of print. Only 2% of respondents in the healthcare group chose print as a preferred source and 24% of respondents chose it as the least preferred way to receive information on ULD. Print was chosen above all other media as the least preferred way for healthcare respondents to receive information on ULD (See Figure 43). The Internet/Intranet was the fourth most popular medium. However, none of the construction workers chose this as a preferred source and 20% of construction respondents chose the Internet/Intranet as the worst way to receive information on ULD. Internet/Intranet ranked as the second least preferred way for construction respondents to receive information on ULD (see Figure 43).

5.4.3 Back pain - Least effective medium

On average, most respondents reported that they would least like to receive back pain information from the Radio (21.2%) or Internet/Intranet (17.2%). TV and Print were also unpopular choices.
Figure 41. Way respondents would least like to receive information on work related back pain

**Radio**

The most common reasons for choosing the radio as the most undesirable source were:

- it is not a visual medium and back pain is a visual topic
- respondents who listened to the radio tuned in for the music and were likely to ignore dialogue or change channel at this point so the message would not get across
- the radio is a social medium and respondents did not want to hear work-related topics in their free time
- many respondents did not listen to the radio.

The following quotes are typical of their responses:

‘sociable thing - divorced from work, difficult to relate it to work - not visual medium’

‘I don’t take notice of what they are saying’

‘it would be nice to have sketches or drawing of the bad habits, useful to show correct height of the computer, posture etc and this is difficult on radio’

‘I don’t listen closely to the radio as a source of information’

‘people switch off, is not visual information’

‘I don’t tune in to listen to information on ULD, I tune in to listen to music’
'back pain is visual thing - wouldn't be able to see it, miss information, hard to get facts out of it, feel wrong, need way to bring it up when at work'

'ignore it - listen to radio on way to work - is in the background'

'never listen when talking - turn over channel'

'the information needs to be physical I need to see something to understand and need to see the images to aid information on how to sit at the workstation - it must be visual'

'don't listen to spoken word on the radio, only music'

'radio is a distraction from monotonous tasks, hearing about work related health and safety tasks would be tedious, especially as there is no visual demonstration of meaning'

'no control over when you receive the info, may target it - difficult to learn when hearing only - need text or pictures'

**Internet/Intranet**

The most common reasons for choosing the Internet/Intranet were that:

- respondents questioned the trustworthiness of the information available
- they did not have access to the medium or did not use it
- they were unfamiliar with the medium or techno phobic

The following quotes are typical of their responses:

'I haven't got it'

'don't get to go on it'

'Internet-phobic'

'sources can be unreliable - look it up on Internet for interest but not trust it'

'no guarantee of the quality of information and resource of where information came from'

'some people have hidden agendas, can't trust it'

'don't use it'

'can't accept validity, not always easy to access'

'not everyone has access'

'not technically minded'

'technophobia and don't like reading'

'wouldn't trust it'
Industry wide

As stated in Section 5.4.3, the industry groups differed in the media they chose as the least preferred to receive information on back pain. The two worst ways to receive information on back pain were the radio and Internet/Intranet.

Respondents in the healthcare group chose print and the Internet/Intranet as the worst way to receive information (22%) and placed radio third. As discussed above, healthcare respondents reported that they were too busy to read printed material and in general reported that they did not use the Internet/Intranet. The finding that healthcare workers rate the Internet/Intranet as the worst way to receive information on MSDs contradicts earlier findings in Section 5.4.1, where they rated the Internet/Intranet as the third most popular way to receive such information. This result may occur because the data is weak. A sample size of 50 healthcare workers may not be large enough to identify their preferences. Alternatively this may reflect the true preference within the group where some people ‘love’ and others ‘hate’ the Internet/Intranet as an MSD information source. If this is the case then care should be taken to ensure the Internet/Intranet is not the primary or sole source of such information.

SME respondents chose print as their second least preferred source in place of the Internet/Intranet. As for healthcare employees, SME respondents reported that they received too much paperwork and could not guarantee to read written information on back pain. Responses included:

‘no guarantee would read it, get lots of paper to read as teacher’

‘so much paperwork in an office it can get lost, skipped’
With the exception of SMEs, all the industry groups chose TV as the third least preferred medium.

Training and face to face, the two preferred media for receiving information on back pain, were low on the undesirability ratings of all industry groups. The most common negative views of these two media focused on their time consuming delivery. Respondents also highlighted their concerns over the trustworthiness of face to face interactions.

Common negative responses for both media included:

**Training** – ‘can impart information a lot more quickly than with training - takes a long time and people turn off, don’t pay attention. Lose the information they are given’

**Training** – ‘very time consuming- no time to do such training, is a turn off’

**Face to face** – ‘be interested in reading quickly not talking to someone - takes longer - not one minute conversation, normally a longer time’

**Face to face** – ‘individual is susceptible to outlandish theories and glossed over facts’

### 5.4.4 ULD - Least effective medium

The rank order of preferred media for receiving ULD information was very similar to that for back pain. Most respondents reported that they would least like to receive ULD information through the radio (20.9%) or Internet/Intranet (18.4%). Print (14.3%) and TV (12.7%) were the next two most unpopular choices.

As for the preferred medium, the reasons respondents gave for choosing the least preferred ULD media were the same as for back pain.

**Industry wide**

As for back pain, the healthcare respondents thought that print was the worst medium for receiving ULD information. The other industry groups were in agreement that the two worst ways to receive information on ULD was through radio followed by the Internet/Intranet.
As for back pain, training and face to face, the two preferred media for receiving information on ULD, were low on the undesirability ratings of all industry groups. The most common negative views of these two media focused on their time consuming delivery and concerns over the trustworthiness of face to face interactions. Comments made were as for back pain.

5.4.5 Focus group - Most effective medium

During the focus groups, we paired participants into their different industry groups and asked them their preferred and least preferred way to receive information on MSDs.

As for the telephone interviews, the preferred way to receive information on MSDs was through training and then face to face. Video, in the form of a training video, was also chosen. The training category overlapped with the ‘video’ category and in the case of one-to-one training with the ‘face to face’ category. The training category included computer based training. None of the other categories overlapped.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Training</th>
<th>Face to face</th>
<th>Video</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>non-SME</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Healthcare</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Construction</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total of 8 groups</strong></td>
<td><strong>8</strong></td>
<td><strong>5</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>

Discussions with participants revealed that to be most effective, training on MSD risks in the workplace should be provided by the company during induction, before the employees conduct their work tasks. They also thought the training should be mandatory. This was a specific
requirement of the construction group as they believed that if it was not compulsory then their employers would not provide them with the training or colleagues would not attend. They made the following comments with regards to mandatory training:

‘Training will not work – if I want the work I take it without training otherwise someone else will. They should make it mandatory – like wearing hard hats was made mandatory. It was like you’d be off site if you don’t wear it so now people wear hats’

‘It would be good to have compulsory training before you start work so for example you’d need a certificate of training before you can be employed. At the moment we just watch a video.’

‘Notices and signs are in place but some people don’t bother to follow them. It would be better to have an induction course as soon as you get on site’

‘Every site is different there are different hazards and it’s always changing like when a JCB moves the ground, it’s not the same place. Training is OK with some locations, but it is difficult for construction workers as we are in different environments. Nurses & office workers pass the notices and signs day in and day out. You can get them all together in a group and train them but is not the case for construction workers. If it was mandatory it may be better.’

Participants in the healthcare group commented that they currently received information on MSD risks through yearly training and thought this was the best way to receive such information. They commented:

‘Provide training on all the legal requirements as they do now – one day training and then yearly updates’.

‘I’m very happy with the way we receive information at the moment. We’re given training in correct techniques and attend mandatory yearly update training. It’s practical training – so you can participate and practice techniques.’

Focus group participants also stressed that training should be job specific and highlight the specific MSD risks for their industry group.

‘We should give people training on risks, guidelines on health and safety presented in induction training, tell them the results of risk assessments during the training and get them to sign a form to acknowledge they’ve been trained at the end of it.’ (SME participant)

‘Do it face to face – tell them about safe systems of work and show them how to do the job safely.’ (non-SME participant)

Participants also commented that in addition to the training it would be useful to have reminders around the workplace and a reference source where they could find more information about MSD risks if required. Participants wanted the additional information to be

‘... without jargon you know, simple, using basic terms. Definitely no big manuals, they always go into all the law. And make it (the information) specific to our areas. The most relevant bits from the HSE’.
5.4.6 Focus group – Least effective medium

The least preferred way to receive information on MSDs was through e-mail and then radio. The Internet/Intranet was also an unpopular choice. This is similar to the findings for the telephone interviews.

<table>
<thead>
<tr>
<th>Industry</th>
<th>E-mail</th>
<th>Radio</th>
<th>Internet/Intranet</th>
<th>Print</th>
<th>Posters</th>
<th>TV</th>
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<td>non-SME</td>
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<tr>
<td>Construction</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total of 8 groups</strong></td>
<td><strong>6</strong></td>
<td><strong>5</strong></td>
<td><strong>2</strong></td>
<td><strong>1</strong></td>
<td><strong>1</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

Figure 45. Way focus group participants would least like to receive information on MSDs

Discussions with participants revealed that e-mail was the least preferred medium to receive information on MSDs as participants received many e-mails throughout the day and did not have time to read them. They commented that e-mails on health and safety matters were likely to be ignored so they could deal with more pressing work tasks. Participants made the following comments:

‘I get so many e-mails during the day, I don’t have time to read something about risks’

‘As I said before I’m on site all day so the last thing I want to do when I come home is log on and do work stuff’

‘I’m really busy during the day so there’s no way I’d have time to read stuff about back pain. I would print it out but then never read it. They (the employer) should make time for us to read stuff’

In addition, similar to the telephone interviews, participants commented that risks of MSDs were better presented in a more visual medium such as training, video or face to face. They did not think they would absorb the information as efficiently in an e-mail.

The arguments against the use of radio as a medium to dispense information on back pain were the same as for the telephone interviews. Participants reported that they tuned into the radio to listen to music not to learn about work related risks. Many participants reported that they did not listen to the radio. All participants thought that it was an unsuitable medium for learning about MSD risks as it was not a visual medium.

Finally, there was a general consensus that work-related information should be presented during work time and that employees should be allotted time to learn about risks i.e. during training, rather than having to find time during their busy day to ‘fit it in’, i.e. e-mails, print, Internet/Intranet.

**Summary of communication channels**

- Respondents did not differ in their top two preferred and least preferred ways to receive information on back pain and ULD.
- Respondents would most like to receive information on back pain and ULD by training or face to face communication.
- Print was the third most popular medium to receive back pain and ULD information but healthcare respondents did not like this medium and ranked it as the worst way to receive information.
- Internet/Intranet was the fourth preferred medium to receive information on back pain and ULD, but construction respondents did not rank this as a preferred medium and ranked it as their second least preferred medium.
- On average, respondents would least like to receive information on back pain and ULD by radio or Internet/Intranet.
- Ease of access to the Internet/Intranet and familiarity with its use affected respondent’s preference towards this source.
- The focus groups confirmed the finding that training and face to face were popular ways to receive information.
- E-mail and radio were the least desirable ways for focus group participants to receive information.
6 KEY FINDINGS AND RECOMMENDATIONS

The main purpose of this research was to understand people’s perceptions of MSD risks in order to identify strategies for changing them. In this section of the report, we present our recommendations for improving people’s understanding of MSDs at work.

6.1 THE KEY FINDINGS

Before we discuss the strategies in detail, it is worth reminding ourselves of some of the key findings of our research.

6.1.1 On the positive side:

- Overall the knowledge and understanding of the people in our sample was surprisingly good – they were generally informed about the risks of back pain and ULDs, had realistic perceptions of the likelihood of suffering from them and of the main risk factors.
- The HSE was generally well regarded and was particularly trusted in the construction industry.
- The different groups demonstrated different levels of understanding and would favour different approaches to communicating the risks and preventative measures.
- Personal experience was the most convincing and powerful force for changing perception and taking appropriate action.
- Face to face training was overwhelmingly endorsed as the preferred and most trusted method for learning about MSDs.
- Word of mouth was the most commonly accessed source of information on MSDs but was also one of the least trusted.
- Doctors, physiotherapists and other medical professionals were trusted to be knowledgeable and up to date (although less so by health professionals).

6.1.2 On the negative side:

- There was some confusion about terminology. The terms musculoskeletal disorder (or MSD) and upper limb disorder were less well understood than the term back pain.
- People were not fully aware of the risks most prevalent to their own industry. For example, in healthcare, stress was ranked by respondents as being more likely to occur than current evidence suggests.
- Contrary to popular belief, the Internet was a relatively unpopular source of information and learning, particularly in the construction industry. The results from the data suggest this is
because it is not considered a trustworthy medium and also because many people only have access to the internet during their precious leisure time.

6.2 RECOMMENDED STRATEGIES

We believe that the HSE should build on its existing good reputation with regard to MSDs by developing the following possible strategies.

6.2.1 Review the terminology used by the HSE to describe MSDs

Despite the efforts of the HSE over the years to use scientifically neutral terminology to describe musculoskeletal disorders, we found that many people were confused by the term. Almost everyone has heard and understands what is meant by back pain. However, confusion about the terms musculoskeletal disorder (or MSDs) and upper limb disorder reduce the effectiveness of the guidance and make it more difficult for people to find help. One solution which should be considered involves using the more populist terms, at least in the self help documentation. Despite the inappropriateness of the term RSI (problems may not be injuries, or strains or caused by repetition), it was generally a far better understood term than ULD.

6.2.2 Promote awareness of MSDs in young people

Although there was a tendency for people to only understand MSD problems when they had experienced them themselves, it would still be worthwhile trying to ensure a correct understanding of MSD risks and prevention at an early age. The increasing number of young people who use computers, or computer games intensively and who carry heavy school bags, means that many people entering the workforce may have already been exposed to some degree of MSD risk. Targeting information at these young people could help prevent this predisposition and improve the accuracy of their risk perception.

6.2.3 Provide support to help organisations develop and maintain a safety culture

The responsibility for creating an effective safety culture clearly lies with employers. However, recognising champions and providing them with effective support and resources is one way to ensure a safety culture which will help them discharge their responsibilities. This culture should include the recognition of appropriate champions for tackling MSDs within the organisation. For example a construction worker with direct experience of back pain or ULDs that were work related. Whilst it is not essential that the champions have suffered from MSDs themselves, the value of direct contact with the consequences of the problems cannot be overestimated. One of the roles of the champion might be to help provide the kind of face to face training which was rated very highly in our survey. Champions might also help to promote a culture whereby information about MSDs was cascaded within organisations by word of mouth. A key task for the HSE would be to provide the kind of resources and material for such a champion (see recommendation 6.2.4).
6.2.4 Target resource material and approaches to the different industry groups

It was clear from the four groups studied that different groups require quite different approaches to promoting awareness of MSDs. The healthcare group was generally well informed and were provided with regular annual training where new information could be readily slotted in. For other organisations, this will be more difficult. However, since in-house sources of information are/were generally seen as trustworthy and helpful, it would make sense to customise industry group oriented material to support these training and advisory activities.

6.2.5 Avoid excessive focus on the Internet as the prime or universal delivery channel for guidance and training resources

Although self paced learning using CD-roms and Internet packages may work for some groups, for example for some white collar workers, they do not work well for others. In construction and healthcare in particular, there was very limited access to the Internet during the working day and a marked reluctance to use precious leisure time for work related learning. In addition the Internet was viewed as a less trustworthy source of information. However, the Internet is a fast, cheap and powerful means of delivering a variety of information resources. At least part of the Internet output could be focussed on supporting the in-house champions proposed above.

6.2.6 Consider making face to face training mandatory in high risk industry groups

It was noticeable that the participants from the construction group in particular believed that only mandatory training would be effective in their industry. They cited the example of hard-hats which had been encouraged and promoted for years but only became widespread when they became compulsory.

6.2.7 Tackle the overestimation of stress as a work risk for many people

Some groups in our survey rated stress as a more likely to occur than other risk factors contrary to what current evidence suggests. One reason for this may be that, like the term back pain, the term stress has entered our everyday vocabulary. People no longer seem to be ‘busy’ or ‘a bit harassed’. Instead they say they are stressed. The problem maybe that they do not distinguish between the normal pressures of life and the disabling pressure which causes a wide range of disorders. In some ways it is similar to the way the term depressed is used in normal conversation to describe feeling unhappy. This is quite distinctly different from clinical depression and few people who use the term in its everyday mode would consider taking anti-depressants. The HSE has an important role in ensuring that, in publicising stress at work as a genuine concern, they avoid creating the impression that the extreme form is a high risk for most people.
6.2.8 Ensure that the medical professionals who are trusted by lay people are well informed about MSDs

A recent research project by System Concepts for the HSE entitled ‘The challenge of managing upper limb disorders – how can health professionals become more effective?’ found that many medical professionals were not well informed about MSDs. The report recommended several actions to improve training and communication. Since many people place a high trust in medical professionals to deal with MSDs, it is important that this trust is not misplaced.
7 CONCLUSION

System Concepts Ltd were commissioned to carry out research to identify how employee populations perceive their risk of experiencing musculoskeletal disorders (MSDs), both in terms of understanding what people’s risk perceptions are and how to change them through targeted information.

We found that overall, the people in our sample were informed about the risks of back pain and ULDs and had realistic perceptions of the likelihood of suffering from them and of the main risk factors. There was some confusion about terminology, with the terms musculoskeletal disorder and upper limb disorder being less well understood than the term back pain. We also found that the different groups demonstrated different levels of understanding and favoured different approaches to communicating the risks and preventative measures.

A number of recommendations have been generated based on the findings from the literature review, the telephone interviews and the focus group with respondents from different industry groups. These include:

- Reviewing the terminology used by the HSE to describe MSDs
- Providing support to help organisations develop and maintain a safety culture
- Targeting resource material and approaches to the different industry groups.

We would like to take this opportunity to thank all those who responded to the questionnaire and helped with this research.
APPENDIX 1  TELEPHONE QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel number</td>
<td>Industry</td>
</tr>
</tbody>
</table>

Greeting, introduce self.

I am working on a project on behalf of the Health and Safety Executive. What we are doing is looking at how people in different industries perceive their risk of getting musculoskeletal disorders, also referred to as MSDs, as a result of their work. We are looking industry wide.

I wanted to speak to you today because I would be very interested in asking you some questions about this topic to find out your opinions.

Do you have 15 minutes to take part in the research?

Thank you. Before we get started it is important for me to let you know that anything you say is confidential. The information we present to the HSE at the end of the project is anonymous - your name and company name will be removed.

Could I please take some personal details from you.

<table>
<thead>
<tr>
<th>Job title</th>
<th>Highest qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18 – 30 31 – 40 41 – 50 51 – 60 61 +</td>
</tr>
<tr>
<td>Gender</td>
<td>M F</td>
</tr>
</tbody>
</table>

How long have you worked in your current job?

How long have you worked in this industry?

Please briefly describe the work you do?
*Try to find out about MH, repetitive tasks, break freq, uncomfortable work environment, working positions etc*

I am going to read out some statements and for each one I would like you to think of your current job and tell me if you think the statement is true or false.

<table>
<thead>
<tr>
<th>Statements</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel overwhelmed with my workload at work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My workload is driven by someone else or a machine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have control over my workload</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My deadlines are manageable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job demands are high</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I work under tight time pressures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I talked at the start about musculoskeletal disorders.

1. **Have you heard of the term musculoskeletal disorders or MSDs?**
   - Y  N
   (go to 2)  (If No prompt with Back pain and WRULD if still N go to MSD scenarios)
   
   Have you heard of:
   - Back Pain (BP)  Y  N
   - Upper Limb disorder (ULD)  Y  N

2. **Which ones have you heard about?**
   - Name/list some of the different MSD and areas of body affected
   
   Also ask about knowledge of BP and ULD.
   If fully aware of both MSD’s go to 3.

Musculoskeletal disorders refer to a group of disorders that affect the bones, muscles, tendons and ligaments of the body. The two most common areas affected are the back and the upper limb. The upper limb refers to the neck, shoulder, arms, hand and wrist area.

**BP**
People suffering with mild back pain may experience a dull ache in the back which is often noticed at the end of the day and tends to go away after a good night’s rest. However with more serious back pain the discomfort is still present upon waking.
In severe cases the person may experience piercing pain in the back and often finds it very painful to perform certain movements or to sit or stand for long periods.

**ULD**
People suffering from ULD often begin by experiencing numbness, tingling or pins and needles in their hands, wrists or arm. Sometimes this discomfort will start and stop depending on the activities they perform, other times it builds slowly throughout the day and is often noticed at the end of the day.
With mild ULD this discomfort often goes away after a good night’s rest. However with more serious MSD the discomfort is still present upon waking.
In severe cases people may find it difficult to grip and they often find it very painful to perform certain movements or to hold postures for long periods of time.

The rest of my questions will be about aches and pains in the back and in the hand, wrist, neck, arm and shoulder area from now on referred to as the upper limb.

3. **Have you or anyone you know had back pain or aches and pains in the neck, shoulder, arm or wrist? If yes, who?**
   - Find out relation to them i.e. someone at work, friend, family find out type of discomfort, severity and source

   BP
   -
   ULD

4. **Do you think YOU are at risk from Back Pain or Upper Limb aches and pains from the work you do?**
   - Y  N
   - BP  Y  N
   - ULD  Y  N

5. **If at the end of a day at work your back felt sore what would you think/conclude had caused this discomfort?**
   - How do you think you would get these aches and pains from your workplace?
6. **If at the end of a day at work your hands felt numb and tingling what would you think/conclude had caused this discomfort?**

   *How do you think you would get these aches and pains from your workplace?*

I’d now like to find out what you think your chances are of getting back pain or upper limb disorder as a result of the work you do.

**BACK PAIN**

7. **How likely do you think it is that you will get back pain in the future from the work you do now?**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Definitely</td>
<td>very likely</td>
<td>Possible</td>
<td>not very likely</td>
<td>never</td>
</tr>
</tbody>
</table>

8. **Why? Back pain**

   If said never go to Q10

9. **What severity/intensity of back pain do you think you would experience?**

   First ask:
   - Mild e.g. dull ache in back
   - Moderate e.g. ache and some pain
   - Severe e.g. extreme pain

   Then rank it on scale.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The pain comes and goes and is very mild</td>
<td>The pain is mild and does not vary much</td>
<td>The pain comes and goes and is moderate</td>
<td>The pain is moderate and does not vary much</td>
<td>The pain comes and goes and is severe</td>
<td>The pain is severe and does not vary much</td>
</tr>
</tbody>
</table>

**ULD**

10. **How likely do you think it is that you will get upper limb discomfort in the future from the work you do now?**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Definitely</td>
<td>very likely</td>
<td>Possible</td>
<td>not very likely</td>
<td>Never</td>
</tr>
</tbody>
</table>

11. **Why? Upper Limb**

   If said never go to Q13.

12. **What severity/intensity of upper limb discomfort do you think you would experience?**

   First ask:
   - Mild e.g. pins and needles, numbness
   - Moderate e.g. ache
   - Severe e.g. pain

   Then rank it on scale.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The pain comes and goes and is very mild</td>
<td>The pain is mild and does not vary much</td>
<td>The pain comes and goes and is moderate</td>
<td>The pain is moderate and does not vary much</td>
<td>The pain comes and goes and is severe</td>
<td>The pain is severe and does not vary much</td>
</tr>
</tbody>
</table>
Could you put the following in order of the most to least likely of happening in your industry?

<table>
<thead>
<tr>
<th>For SME and non-SME respondents:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiencing back pain</td>
<td></td>
</tr>
<tr>
<td>Slipping or tripping</td>
<td></td>
</tr>
<tr>
<td>Experiencing upper limb disorder</td>
<td></td>
</tr>
<tr>
<td>Experiencing assault or violence</td>
<td></td>
</tr>
<tr>
<td>Experiencing stress</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For Healthcare respondents:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiencing back pain</td>
<td></td>
</tr>
<tr>
<td>Slipping or tripping</td>
<td></td>
</tr>
<tr>
<td>Experiencing upper limb disorder</td>
<td></td>
</tr>
<tr>
<td>Experiencing needle stick incidents</td>
<td></td>
</tr>
<tr>
<td>Experiencing assault or violence</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For Construction respondents:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiencing back pain</td>
<td></td>
</tr>
<tr>
<td>Falling from height</td>
<td></td>
</tr>
<tr>
<td>Experiencing upper limb disorder</td>
<td></td>
</tr>
<tr>
<td>Being crushed by collapsing structures</td>
<td></td>
</tr>
<tr>
<td>Slipping or tripping</td>
<td></td>
</tr>
</tbody>
</table>
**BACK PAIN**
I’d now like to find out how you came to the conclusion about the chances of getting back pain in your workplace from the work you do.

14. **Before the questionnaire today had you heard about BP?**

   *If no go to Q21*

15. **Can you remember where you heard about the risks of BP what was the source of the information? (get source and media)**

   1. 
   2. 
   3. 

   *For example employer/union/friend/work colleague/broadcaster such as the BBC/doctor/government/HSE health or sports club/Internet etc*

16. **I am going to read out a list of possible sources where you could get information about back pain. As I read them out can you please tell me whether you have ever got information about back pain from the source.**

<table>
<thead>
<tr>
<th>Source</th>
<th>BP</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(broadcasts, videos, adverts, documentaries, news, drama etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(station, programme, adverts, news, drama etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(which one, news article, advert, feature i.e. health section etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(which ones)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade Unions/associations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(which ones, type of information give i.e. video, booklet, poster etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and Safety Executive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(publications, website, Infoline, face to face, posters etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(which sites)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word of mouth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(who - friends/relatives/HS personnel, manager etc)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(how – notice boards, personnel, policy document, intranet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legislations/ACOPs/Guidance etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training courses (company/other)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other training media such as computer based training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leisure activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(sports clubs, gyms, personal trainers, Women’s Institutes etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr, therapist, clinics, private healthcare providers (BUPA, HSA) (who)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmaceutical co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(which ones)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal cases on BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal injury firms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charities (RoSPA)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health books</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic articles</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. Which of the sources, that you have chosen (read out the list they have selected), would you trust most to provide you with the correct information on work related BP?

18. Why?

19. Which of these sources would you trust least to provide you with the correct information

20. Why?

21. I am going to read out a list of different ways you could receive the information on work related BP?
- FtF – one to one, small group
- Training
- Video
- Print (magazine, newspaper, booklet etc)
- Internet /intranet
- Posters
- TV
- Radio
Which one do you think is the best way to receive information?

22. Why?

23. Which way would you least like to receive information on BP?

24. Why?
ULD
I'll now ask you the same question but this time about upper limb discomfort.

25. **Before the questionnaire today had you heard about work related ULD?**

   If no go to Q32

26. **Can you remember where you heard about the risks of work related ULD what was the source of the information?**

   1.
   2.
   3.

27. **I am going to read out a list of possible sources where you could get information about upper limb discomfort. As I read them out can you please tell me whether you have ever got information about upper limb discomfort from the source.**

<table>
<thead>
<tr>
<th>Source</th>
<th>ULD</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV (broadcasts, videos, adverts, documentaries, news, drama etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio (station, programme, adverts, news, drama etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper (which one, news article, advert, feature i.e. health section etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazines (which ones)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade Unions/associations (which ones, type of information give i.e. video, booklet, poster etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and Safety Executive (publications, website, Infoline, face to face, posters etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet (which sites)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word of mouth (who - friends/relatives/HS personnel, manager etc)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company sources (how – notice boards, personnel, policy document, intranet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legislations/ACOPs/Guidance etc</td>
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<td>Training courses (company/other)</td>
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<td>Other training media such as computer based training</td>
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<td>Leisure activity (sports clubs, gyms, personal trainers, Women’s Institutes etc)</td>
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<tr>
<td>Dr. therapist, clinics, private healthcare providers (BUPA, HSA) (who)</td>
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<td>Pharmaceutical co. (which ones)</td>
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<tr>
<td>Legal cases on ULDs</td>
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<tr>
<td>Personal injury firms</td>
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<tr>
<td>Charities (RoSPA)?</td>
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<tr>
<td>Health books</td>
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<tr>
<td>Academic articles</td>
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</table>
28. Which of the sources, that you have chosen (read out the list they have selected), would you trust most to provide you with the correct information on work related ULD?

29. Why?

30. Which of these sources would you trust least to provide you with the correct information

31. Why?

32. I am going to read out a list of different ways you could receive the information on work related ULD?  
FtF – one to one, small group  
Training  
Video  
Print (magazine, newspaper, booklet etc)  
Internet /intranet  
Posters  
TV  
Radio
Which one do you think is the best way to receive information?

33. Why?

34. Which way would you least like to receive information on ULD?

35. Why?

Thank you very much for participating in the research. The information you have provided is very useful and will be used to help influence people’s perceptions of musculoskeletal at work.

Do you have any questions about anything we have gone through?  
Thank you again for your help and have a nice day.
APPENDIX 2 FOCUS GROUP PROTOCOL

Hand out consent forms.
Introduce self and project.

- What do you think Musculoskeletal Disorders are? Can you each give me a definition?
- Have any of you heard of MSDs in relation to the work you do?
- From whom? (source)
- How? (medium)

Tell them what MSDs are.

Determine the full range of factors that influence risk perception in relation to MSDs

- Now you know what MSDs are, what do you think is your risk of getting a MSD from the work you do? – low, medium or high?
- OK, so you were all able to tell me your risk of getting a MSD at work. How did you decide that that was your risk level? What made you think that?

Prompt if required – i.e. those of you that said you were at low risk why do you not think your risks were high or medium? Those of you that said medium, why did you not think your risks were low or high etc.

- If you think of people in your workplace how do you think they decide what their risk is of getting back pain or wrist discomfort?

What I am trying to find out is what factors influence how we perceive risks. Basically, how do we decide our level of risk? What helps us to decide the level of risk we are exposed to?

To help us answer this question I’d like you to imagine 2 people: Grace and Fred.

Both of them work for a publishing company, ‘Printing is us’ where they are responsible for:
- typing up all the correspondence
- lifting & carrying paper to the printers
- using some of the large printing machines for several hours at a time that involve the same arm movements.
They both do the same job with the same amount of carrying and lifting of heavy items and do many repetitive tasks. Their work is exactly the same but they are very different people:

- Grace is 21, she has just finished a BA (Hons) degree in English and started working for ‘Printing is us’ a month ago. This is her first job.

- Fred is 55, he has been working in the printing industry since he left school at 16 (39 yrs), he has been working at ‘Printing is us’ for the last 20 years.

I’d like you to imagine that I visit the company one day and ask them both what they think their risk of getting MSDs from work. So for example things like back pain and ULD i.e. carpal tunnel syndrome (RSI).

- I’d like you to imagine you are each of these people. What risk level do you think Grace would say she was exposed to? How about Fred?

- How do you think they would decide that was their risk level? What do you think would influence their decision?

If they do not come up with any factors, prompt by asking about a few of the factors from the literature review and if they think these things would influence perception and how (only if required):

- Age
- Sex
- Experience of work
- Personal experience of injury
- Education & Training
- Knowledge of other people who have experienced injury
- Overly cautious people or opposite etc.

- OK so we’ve mentioned a few things that could influence risk perception. Now I’d like to narrow it down to the main 3 things from the list above that you think most people use to come up with their risk level.

So the 3 things that influence people’s idea of how at risk they are at work/from MSDs

Listen to see if there is any difference in opinions between industry groups.

**Discuss proposed strategies for influencing perceptions.**

I’d like you to imagine that you are the Minister of Health in the UK and you know that people like Grace & Fred misunderstand their risk of getting MSDs at work – for example they think their risks are low when in fact they are high.

- What strategies would you put in place to correct people’s perception? What things could you do to make sure they understood their risks at work?

- How do you receive most of your information about your risk of injury at work? Source & medium
- Is this a useful way of receiving information? What are the positives and negatives? Pros & cons

- How would you like to receive information about your risks of getting MSDs at work?

Give them cards with the names of different sources and mediums and split them into groups of people in the same industry group. Get them to select from the cards and fill in the worksheet:

- Trustworthiness of sources:
  - most trustworthy, 2nd most trustworthy
  - least trustworthy, 2nd least trustworthy

- Preference of mediums:
  - most preferred/best way to receive information and 2nd most
  - least preferred/worst way to receive information and 2nd worst

- Now we have done that exercise, if I return to the original question. If you were the Minister of Health for the UK which of these sources and mediums do you think would be the best to use to correct people’s wrong perceptions of their risks.


