Compliance with the Manual Handling Regulations amongst a Random Selection of Small Businesses in England

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Manual handling activities have long been recognized as major contributors to occupational injury and ill health. Following a series of consultative documents, the Manual Handling Operations Regulations (MHORs) and their associated Guidance came into force in the UK in January 1993. More than 5 yr on, an investigation was performed to evaluate response to this legislation amongst a random selection of small businesses within a business district of Shropshire, England. A postal questionnaire was sent to 100 companies employing 5–50 workers. Responses were obtained from 80 companies, ranging from retailing to metals/engineering. Although all of the companies are likely to perform activities requiring manual handling assessments under the MHORs, many claimed never to have heard of the legislation (38%) and almost half (46%) had not performed an assessment. Compliance varied significantly by business type, with the nine companies engaged in metals/engineering reporting significantly better compliance (P < 0.05). Of the 43 companies who claimed to have undertaken assessments, 73% (32 companies) indicated that manual handling activities had been changed, with all claiming to have reduced lifting activities, a significant proportion (75%) making improvements to the working environment and over half (59%) reducing the weight of loads. Many of the companies who indicated full compliance with the legislation (21 companies) stated that the benefits to their businesses outweighed the cost of compliance. Additional factors analysed by the study include source of legislative awareness, personnel performing assessments, employee training and method used, and reasons for non-compliance with the MHORs.

Keywords: manual handling; small business; SMEs; legislation; compliance

INTRODUCTION

Each year, over 100 million days of certified sickness absence are attributed to back injury in the UK. There is little doubt that manual handling injuries are a major burden to the economy, and, not forgetting the burden falling on the sufferers themselves, the cost to business has been estimated at over £2 billion a year (Tudor, 1998).

In 1982, the Health & Safety Commission (HSC) circulated a consultation document containing new regulations and guidance relating to manual handling at work (HSC, 1980). They represented a major departure from previous legislation on this topic in that they emphasized that the risk of injury from manual handling was not just a function of the weight being handled, but described an ergonomic approach to identifying the sources of risk of injury in manual handling activities. Following a series of consultative documents, the Manual Handling Operations Regulations (MHORs) and their associated Guidance were published in 1992 by the now-named Health & Safety Executive (HSE), and came into force in January 1993 (HSE, 1992a).

According to the legislation, manual handling means using one or both hands, or a degree of physical force, to lift, move, carry, put down, throw, push or pull a load. To comply with the MHORs, an employer must make a list of every manual handling operation carried on within his or her business or undertaking. The employer must then determine which of these operations presents a risk of injury and take action to eliminate or minimize that risk. The MHORs do not address the need for appropriate information, instruction and training apart from that

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already mentioned. However, the Management of Health and Safety at Work Regulations (HSE, 1992b) and their recent revision (HSE, 1999) impose a duty on every employer to provide employees with ‘comprehensive and relevant’ information on any risks to their health and safety which they are likely to encounter in the course of their employment, and on the measures which have been introduced to eliminate or minimize those risks.

After having at least 5 yr to implement the legislation, the intention of this investigation was to determine employer’s awareness and response to the Regulations amongst a section of the business community. Specifically, the study estimates employer awareness of the Regulations, whether assessments have been undertaken and by whom, if controls have been implemented, whether information or training has been provided to employees, and whether the companies consider the Regulations beneficial.

METHOD

From a commerce directory for a single business district in Shropshire, England (Commerce Business Directories, 1997), 230 businesses were identified as employing between five and 50 workers. From these, 100 companies were randomly selected and categorized into different industry types using the business descriptions from the commerce directory. The choice of business type was therefore governed by their proportionality in the directory and no effort was made to include or exclude any particular industry.

Eleven different business types were identified. The questionnaire was piloted by sending it to a random selection of 10 businesses drawn from the directory. Responses from this pilot group reflected the distribution of replies from the study, with the service sector being predominantly represented. Eight replies were received and as a result of the responses, minor changes were made, including the removal of one question regarding sickness absence in relation to manual handling activities. None of the companies approached was prepared to answer this question, and its value in respect of the study was minimal. In late 1998/early 1999, all 100 companies were posted the modified questionnaire (Appendix), along with a prepaid envelope for return of postage to encourage response.

Upon receipt, questionnaires were scrutinized for several factors to assess their eligibility for inclusion. Most questionnaires were completed satisfactorily, with only a few returned to the company for completion or clarification. A number of forms contained additional unsolicited information. Whilst relevant in determining opinions of employers to the MHORs, this additional information was not pertinent to the objectives of the study and is therefore not represented in the results.

RESULTS

Questionnaires were received from 80 of the 100 companies, representing a total of 1594 full and part-time workers. Of the 20 non-responding companies, 16 had either ceased business or relocated without a forwarding address. The mean length of operation for the businesses selected was 20.4 yr. Eleven business sectors were identified and Table 1 shows the responses received by type of business. A variety of business types are represented, with a significant number from service industries.

Knowledge of the regulations

As shown in Fig. 1, 30 of the 80 companies (38%) claimed they had never heard of the MHORs. Of the remaining companies, most had gained their knowledge of the legislation from HSE publications. Companies were asked whether they thought the MHORs applied to their organization. As shown in Table 1, 58% (46 out of 79 companies) thought the MHORs were applicable, which means 42% of the companies either did not know about them or thought the legislation was not applicable to their business. The metals and engineering sector indicated 100% awareness, and although the numbers were relatively small, this was significantly greater than any other industry (P < 0.05). The automotive and food and drink sectors showed the highest proportion of ignorance.

In general, duration in business did not appear to influence regulatory awareness, although amongst businesses operating for 21–30 yr, only 20% were unaware of the legislation (P < 0.10).

Manual handling assessments

To comply with the duties under the MHORs, an employer must assess their operations to determine which tasks present a risk of injury to the persons engaged in that particular manual handling activity. As shown in Table 1, 43 of the companies (55%) stated that they had undertaken manual handling assessments in their workplace, with varying levels
of compliance within different business types. All nine of the metals and engineering companies reported 100% completion of manual handling assessments, which was significantly greater than any other business type ($P < 0.05$).

As seen in Fig. 2, assessments were performed predominantly by managers, health and safety personnel, and safety representatives. Of the 32 companies who implemented changes following the assessment, methods used to reduce manual handling risks varied, with some companies only using one method and others selecting several (Table 2). All of the companies claimed to have reduced lifting activities, with a significant proportion making improvements in the working environment (75%) and reducing the weight of loads (59%).

The reasons for not undertaking assessments were also questioned (Fig. 3). The most common reason resulted from a lack of awareness of the legislation (69%). An additional 17% did not feel that compliance was a priority. Some anomalies arose in this question, as some companies who had previously professed not to have heard of the MHORs gave answers that indicated that they had.

Amongst this group of small businesses, the size of the organization did not appear to influence the likelihood of an assessment being made, with companies employing 5–15 workers just as likely to have conducted an assessment as those employing 16–50.

Information, instruction and training

Most companies (67 of 80; 84%) claimed to have provided employees with some form of training, including companies where assessments had not been performed, implying that companies were aware of the risks without being aware of the legislation. In many cases, companies were providing more than one method of information and instruction. As seen in Table 3, the most commonly used method was in-house, on-the-job training, which was performed in 47 companies (69%). The least common method was formalized practical training (24%) and very few companies used external resources for training (9%). Of the 13 companies who professed to provide no training, only two had been aware of the legislation.

Benefits to business

Forty-five companies claimed to have complied with the MHORs. However, when addressing the question of whether benefits outweighed the costs of implementation, 47 replies were received. The additional replies were from companies who felt they had undertaken many of the measures to comply, without having specific knowledge of the MHORs.

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Table 1. Responses to whether companies think the MHORs apply to them and whether assessments were performed

<table>
<thead>
<tr>
<th>Business type</th>
<th>Total responses</th>
<th>Opinion as to whether regulations apply to company</th>
<th>Assessments performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>%</td>
<td>Yes</td>
</tr>
<tr>
<td>Automotive</td>
<td>7</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Chemical/pharmaceutical</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Consumer products</td>
<td>10</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Construction</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Electronics</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Food and drink</td>
<td>6</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Metals/engineering</td>
<td>9</td>
<td>11</td>
<td>9$^a$</td>
</tr>
<tr>
<td>Paper/printing</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Petrochemicals/oils</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Retailers</td>
<td>8</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Services</td>
<td>29</td>
<td>36</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
<td>46</td>
</tr>
</tbody>
</table>

As % of responses 58 11 30 55 45

$^a$One company failed to respond to the question.
$^b$Two companies failed to respond to the question.
$^cP < 0.05 (\chi^2)$; Fisher’s exact test = 0.05.
$^dP < 0.05 (\chi^2)$; Fishers exact test = 0.0035.
themselves. Of the 47 companies, 21 (45%) believed that the benefits from implementing the MHORs outweighed the cost that was incurred by doing so, with another 21 (45%) claiming it was too early to tell. Five companies did not believe that the benefits outweighed the costs of compliance.

**DISCUSSION**

A high response rate to the questionnaire was achieved, which serves to minimize potential bias. Interestingly, the fact that a significant proportion of companies had not heard of the MHORs did not seem to prevent their returning the questionnaire.

Methods used to reduce manual handling risks depend upon the nature of the manual handling hazard identified. In this study, reducing pushing and pulling was the least used method, which may only indicate that such problems were not significant from the risk assessments made. Reducing weight of loads, frequency of lifting and improving the working environment were the most commonly used risk reduction techniques. This is in common with findings from an earlier study (Tesh et al., 1997), and possibly reflects the relative ease with which such measures can be introduced. As a possible control method, ‘improving the working environment’ was not defined in the questionnaire, so this category could have been misinterpreted to include controls other than mechanized lifting/handling equipment and other engineering technologies.

Several years after the legislation was introduced, the HSE funded a study to investigate awareness and response to the MHORs (Tesh et al., 1997). The study included a postal questionnaire to 5000 employers, followed by site visits to a proportion of consenting companies, where implementation of the MHORs was investigated. The findings suggest a relatively high level of implementation of various provisions of the MHORs. However, the results of the Tesh et al. study cannot be safely extrapolated to small businesses for several reasons. First, the response rate from the original questionnaire was low (30%), which questions whether the results are truly representative of industry as a whole. Secondly, during the phase that investigated implementation of the MHORs, small businesses employing <25 workers were underrepresented, with only two businesses being included. Finally, selection bias cannot be discounted as visits to business sites were determined by the comprehensiveness of the data received from the postal questionnaire—a factor recognized by the researchers.

The level of ignorance and non-compliance discovered by the current study was not altogether unexpected. Similar results were noted with the Noise at Work Regulations (Honey et al., 1996) and the Display Screen Equipment Regulations (Honey et al., 1997), both of which found that only ~50% of

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### Table 2. Methods used to reduce manual handling risks

<table>
<thead>
<tr>
<th>Business type</th>
<th>Reduced twisting/stooping</th>
<th>Reduced lifting</th>
<th>Reduced pushing/pulling</th>
<th>Reduced carrying distances</th>
<th>Reduced frequency of handling</th>
<th>Reduced weight of loads</th>
<th>Improved working environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chemicals/pharmaceuticals</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Consumer products</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Electronics</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Food and drink</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Metals/engineering</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Paper/printing</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Petrochemicals/oils</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Retailers</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Services</td>
<td>6</td>
<td>9</td>
<td>6</td>
<td>3</td>
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<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>32</td>
<td>15</td>
<td>17</td>
<td>13</td>
<td>19</td>
<td>24</td>
</tr>
<tr>
<td>As % of companies who performed assessment</td>
<td>50</td>
<td>100</td>
<td>47</td>
<td>53</td>
<td>40</td>
<td>59</td>
<td>75</td>
</tr>
</tbody>
</table>

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**Fig. 3.** Reason for not performing assessment.
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employers were aware of the legislation. Also, a survey performed in 1994 (Tesh et al., 1997) reported that 74% of employers had not complied with the Control of Substances Hazardous to Health (COSHH) Regulations, also implying a low level of awareness. However, a more recent report on the perception and use of occupational exposure limits indicated that only 35% of companies using chemicals were unaware of the COSHH Regulations (Topping et al., 1998), perhaps suggesting that awareness and/or compliance might increase with time.

In an attempt to extrapolate conclusions from the current study, it would be unwise to assume that results from 80 companies in Shropshire are representative of small businesses throughout England in 2002. It should be noted that this investigation was carried out in late 1998/early 1999. The HSE has recently begun to target small to medium-sized enterprises and has also published manual handling guidance targeted at specific industries, such as construction, printing, woodworking, chemical manufacturing and offshore work. It cannot be ruled out that a similar survey conducted in 2002 might find that awareness and/or compliance has increased.

Reasons for non-compliance will vary, but are likely to include those expressed in three written replies that could not be analysed for this study. The replies indicated that pressures on small businesses far outweighed any effort to obtain information on safety legislation, with survival in a competitive market place being the key theme expressed.

Additionally, it has been suggested that assessments are not performed because individuals perceive a lack of the skills required to perform them. It is quite possible that many company directors perceive that performing the assessment requires a degree of specialist knowledge and/or resources that are not readily available to them. And once the assessment is made, additional knowledge will be necessary to determine a feasible prevention measure, with resources necessary to implement them. Evidence that this perception might be warranted is provided by Tesh et al. (Tesh et al., 1997), who report that an effective prevention programme generally requires multiple interventions, including a combination of ergonomic engineering, training and personnel selection.

There is an assumption that performing the duties required by the MHORs are likely to reduce worker ill-health, and the prevention of ill-health was at least one justification for implementing the legislation in 1992. Unfortunately, these findings suggest that a significant proportion of small companies either remain unaware of the legislation or simply choose not to comply. However, even without awareness of legislation, it is likely that a proportion of the companies use common sense approaches to identify and control manual handling risks, evidenced by the fact that 84% of the companies performed some degree of in-house training, although only 55% had performed assessments.

REFERENCES


Table 3. Methods of providing information and training to workers

<table>
<thead>
<tr>
<th>Business type</th>
<th>Information on hazards from lifting/handling</th>
<th>On-the-job instruction on lifting techniques</th>
<th>Formal practical training in lifting and handling</th>
<th>No information, instruction or training provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Chemicals/pharmaceuticals</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Construction</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Consumer products</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Electronics</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Food and drink</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Metals/engineering</td>
<td>6</td>
<td>7</td>
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<td>1</td>
</tr>
<tr>
<td>Paper/printing</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
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<tr>
<td>Petrochemicals/oils</td>
<td>2</td>
<td>2</td>
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<td>0</td>
</tr>
<tr>
<td>Retailers</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Services</td>
<td>9</td>
<td>13</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>47</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>As % of total replies</td>
<td>59</td>
<td>69</td>
<td>23.5</td>
<td>19</td>
</tr>
</tbody>
</table>
HSE. (1992b) Management of health and safety at work regulations and approved code of practice. London: HSE.
### Question 1: What Industrial Sector does your company fit into?
- Chemicals/Pharmaceuticals
- Metals/Engineering
- Automotive
- Food & Drink
- Consumer Products
- Petrochemical/Oils
- Electronics
- Paper/Printing
- Retailers
- Services

### Question 2: How long has your business been in operation? (to the nearest year) _____

### Question 3: How many employees do you employ?
- Full time
- Part time

### Question 4: How did you find out about the Manual Handling Operations Regulations?
- Never heard of them
- Official HSE Publication
- Trade Association
- Trade Magazine
- CBI

### Question 5: Do you think these Regulations apply to your organisation?
- Yes
- No
- Don't Know

### Question 6: Has your company undertaken any assessments of manual handling activities in the workplace?
- Yes
- No

### Question 7: If assessments have been undertaken, are they:
- Less than 25% complete
- 25-50% complete
- 50-75% complete
- 100% complete
- Not undertaken

### Question 8: If assessments have been carried out, who did them?
- Health & Safety Manager
- Safety Representative
- Engineer
- Line Supervisor
- Occupational Health Professional
- Manager

### Question 9: If you have not undertaken assessments is this because: (pick most appropriate answer)
- Not enough time
- Too busy
- Seen as too expensive
- Not a priority
- Unclear how to apply Regulations
- Did not know about them

### Question 10: If you have undertaken assessments have you changed the way manual handling activities are performed in your workplace as a result?
- Yes
- No

### Question 11: If you have made assessments of manual handling activities, what methods have you used to reduce manual handling risks? (tick all that apply)
- Reduced twisting/stooping
- Reduced lifting
- Reduced pushing/pulling
- Reduced carrying distances
- Reduced frequency of handling
- Reduced weight of loads
- Improved working environment

### Question 12: Where necessary, have you provided employees undertaking manual handling activities with any of the following? (tick all that apply)
- Information about hazardous lifting/handling jobs
- Written instruction in correct lifting techniques
- No information/instruction given

### Question 13: If you provided information, instruction and training was this by (tick all that apply):
- Written information
- In-house training
- Externally organised training
- No information training given

### Question 14: Has your Company experienced any accidents or injuries to employees in the last 12 months as a result of manual handling activities?
- Yes
- No

### Question 15: If the answer to question 14 was YES, how many injuries occurred (enter number in box)

### Question 16: Have you any of the following in-house expertise in your business? (tick all that apply)
- Medical Practitioner
- Ergonomist
- Physiotherapist
- Health & Safety Adviser
- Hygienist
- Training Department
- None of these

### Question 17: Have you used any of the following on a contractual basis to help comply with the Manual Handling Regulations (tick all that apply)
- Medical Practitioner
- Ergonomist
- Physiotherapist
- Health & Safety Adviser
- Hygienist
- Training Department
- None of these

### Question 18: If you have complied with the Manual Handling Regulations, do you think that the benefits have outweighed any costs incurred?
- Yes
- No
- Too early to tell

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**Appendix.** The survey questionnaire.