## **Manual Handling Hazards in University Libraries**

By THE UNIVERSITIES SAFETY ASSOCIATION WORKING GROUP ON MANUAL HANDLING IN LIBRARIES\*

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#### Abstract

A Working Group of the University Safety Association was formed in 1998 to address concerns about manual handling issues in libraries. The Group consisted of library staff, health and safety advisers, occupational health nurses and an ergonomist. Discussions resulted in the production of a guidance document. The Group also developed a questionnaire as a tool for investigating the extent of work related upper limb disorder (WRULD) cases associated with manual handling in libraries. The questionnaire was sent to university libraries and 54 completed questionnaires, partially or fully suitable for analysis, were received from 39 different institutions. 3943 staff members in 137 libraries were represented.

26% of libraries reported at least one diagnosed or putative WRULD case. 75 cases were reported in total: an incidence of 18 cases per 1000 staff per year. WRULD cases were associated with administration, receiving and processing acquisitions, issue desk activities, re-shelving books, and other activities involving manual handling. 21 WRULD cases were reported amongst library staff who re-shelved books, 27 cases amongst staff working at book issue & return desks and 7 cases attributed to other manual handling activities (postal delivery duties, moving books during an emergency, photocopying, use of trolleys, processing new acquisitions and use of compact shelving).

The study demonstrated that WRULD injuries associated with a variety of manual handling operations were potential hazards in the library environment and that there is a need to take proactive measures to reduce the risk of injury.

#### **Kev words**

Manual handling, university libraries, work related upper limb disorder, musculo-skeletal injury.

#### Introduction

Library staff perform a number of manual handling operations as part of their work. Examples are:

- book issue and return;
- re-shelving returned books;
- pushing book trolleys;
- moving book return boxes; and

• manual operation of movable stacks.

Although the weight of objects handled is not normally large, some repeated operations may involve the exertion of undesirable force, the use of uncomfortable handgrips and the adoption of static or awkward postures. The policy of some libraries of employing dedicated staff (e.g. for re-shelving books) may severely restrict the opportunities for job rotation and

complete all questions and to send the questionnaire to the University Safety Officer at the University of Warwick for analysis. A contact address was given if people required clarification or assistance in completing the questionnaire. Copies of the questionnaire can be found at http://www.warwick.ac.uk/services/safety-office/libhand.htm.

### **Response to the questionnaire**

56 completed questionnaires were received. Two contained insufficient data for analysis and were not included in the study. 35 institutions submitted single questionnaires and four submitted 7, 7, 3 and 2 questionnaires respectively. Some questionnaires contained data on

number of diagnosed cases reported by a single library was six, the largest number of putative cases was five and the largest number of total cases was eight. It became clear, however, from answers to subsequent questions that the likely causes of WRULD in a number of cases were activities (such as work with display screen equipment) other than manual handling.

### Activities associated with WRULD in libraries

Respondents were asked to allocate staff to 13 different task groups. Where staff undertook

Questionnaire	Diagnosed WRULD	Putative WRULD	Continuous Period without break (h)
В	1	-	Up to $1/2$
С	-	1*	11/2 - 2
D	-	1	1 - 1 <sup>1</sup> / <sub>2</sub>
Н	2*	-	$1^{1}/_{2} - 2$
I	-	1	Up to $1/2$
J	1	-	$1^{1}/_{2} - 2$
K	-	3	1 - 1 <sup>1</sup> / <sub>2</sub>
L	-	1	Up to $1/2$
M	-	1	1 - 1 <sup>1</sup> / <sub>2</sub>
N	1	-	Up to ½

<sup>\*</sup> These cases also appear in Table VI.

### Table IV WRULD cases in other library staff undertaking shelving duties

### WRULD injuries to book issue and return staff

28 out of 54 questionnaires analysed (52%) stated that dedicated book issue/return staff were behopolydel (though (the 0f2 (the 26e) pot target plan total of as 16) Thurst (why 27-8(R.0006((d)) questionnaires, which indicated numbers of staff involved, a total of 655 staff were reported or 24.3 per questionnaire (range 8 - 88 staff). The continuous period of time that dedicated book issue/return staff worked without a break varied from less than half an hour to over  $2^{1/2}$  issue/

T	-	1	$1^{1}/_{2}-2$
U	-	1*	2 - 21/2

<sup>\*</sup> could be due to display screen usage.

#### Table V WRULD cases in dedicated book issue/return staff

40 out of 54 questionnaires (74%) indicated that other library staff also undertook issue/return desk duties. The total number of staff involved was 1036 or 25.9 per questionnaire (range two to 140 staff). The average continuous periods of time that dedicated book issue/return staff worked without a break ranged from under half an hour to over two hours (with 1-2 hours being commonest). 18 questionnaires stated that there was a maximum daily period staff could work at the issue desk: the average period was 3.1 hours (range 1-7 hours). Ten out of 40 questionnaires (25%) reported a total of 16 WRULD injuries as shown in Table VI.

Questionnaire	Diagnosed	Putative	Continuous Period
	WRULD	WRULD	without break (h)
С	-	1*	$1^{1/2} - 2$
D	1	1	$1^{1/2} - 2$
Н	2*	-	1 - 1 <sup>1</sup> / <sub>2</sub>

K -  $\frac{3}{1 - 1^{1/2} - \frac{1}{1}} 6c0 \text{ Tw}(1)\text{Tj}0.(\text{Upf})5 \text{ TD}21 - \frac{1}{1} c^{1/2} + \frac{1}{1} c$ 

<sup>\$</sup> ascribed to winding mobile shelving.

• trolley use; and

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However, they do have the advantages of being relatively rapid, easy to administer and giving an indication of a potential occupational health with the minimum expenditure of resources.

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