Making better best: application of a practical consultative process to improve the work arrangements for art gallery workers.

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Introduction

The National Gallery of Victoria has a dynamic textile exhibition programme which requires conservation of textiles and costumes and movement and dressing of mannequins for photography and display. These activities almost always involve lifting and manoeuvring dressed and undressed mannequins, often repeatedly. These awkward tasks are carried out by a broad range of gallery staff including textile conservators and display specialists, art handlers, curators and photographers. Stresses on the costumes and other aesthetic requirements are always considered throughout by these expert staff but stressors on the human carrying out the work can be overlooked.

Practice innovation

The frequent and repetitive handling of costumes and mannequins were identified by the staff as risks for work-related musculoskeletal disorders. Ergonomic advice was sought to improve handling and remedial conservation equipment and systems used by the conservation team and other gallery staff. Previous ergonomic interventions in this type of work had resulted in some reduced postural demands, but generally focus on a single task within this complex work system, not considering the complexity of the entire job and all the various stakeholders in the different workspaces, and frequently neglecting work organisation issues.

Sources of information

The global conservation community and the literature were surveyed to identify commonly used work methods for these tasks, and approaches to jobs with similar activity demands in other industries. A participatory stakeholder methodology was used to ensure all staff and component tasks within the job systems were considered, from textile repair to installation of the mannequins within the varied exhibition spaces. A practical ergonomics framework was used to systematically identify all hazards in these complex activities and all stakeholders were involved in the design and development of comprehensive and effective controls applicable to all the multiple stakeholders.

Findings

Hazards were identified throughout the work system and related to physical, environmental and organisational demands. (See Table 1: Example of summary of hazards and risks when mannequin handling using an ergonomics framework.) Controls implemented included the trial and introduction of tailored manual handling equipment and furniture for textile repair, mannequin dressing, undressing and photography, and movement into and out of installation areas. A systematic approach to changes to equipment and work procedures enabled integrated risk management across textiles conservation and other areas of the organisation.

Discussion

The positive and practical outcomes from this intervention for all stakeholders underlined the importance of both a comprehensive and consultative risk management process with active stakeholder participation, and the underpinning use of a practical framework for comprehensive identification of risks and the implementation of ergonomic systems.
Table 1: Example of summary of hazards and risks when mannequin handling using an ergonomics framework.

<table>
<thead>
<tr>
<th>RISKS (outcomes) to humans</th>
<th>EQUIPMENT</th>
<th>HAZARDS</th>
<th>ORGANIZATIONAL</th>
</tr>
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<tbody>
<tr>
<td>Conservators</td>
<td>- use of conventional tables, work chairs, and trolleys, rather than purpose-specific furniture and equipment. - assembly of mannequins from large, heavy boxes at floor level. - work materials valuable and often fragile. - mannequins unbalanced; hand grips are limited; contact with textiles must be minimized to avoid damage.</td>
<td>- special illumination demands for fine work. - limited space within work area. - non-slip floor surface limits sliding.</td>
<td>- work conditioned by aesthetic requirements of gallery &amp; exhibits. - limited and often insufficient storage facilities. - high skill &amp; high consequence activities. - insufficient provision of purpose-specific equipment for manual handling. - only generalized furniture for specialist tasks. - unpredictable workloads - frequently short turnaround time - double handling due to lack of storage.</td>
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<tr>
<td>Photographers</td>
<td>- dressed mannequins on stands are unbalanced; hand grips are limited; contact with textiles must be minimized to avoid damage. - work materials are valuable &amp; fragile. - fixed photographic equipment, backdrops, etc. increases difficulty of positioning dressed mannequins - absence of purpose-specific equipment for handling and moving mannequins.</td>
<td>- need to ensure white, blemish-free surfaces. - restricted movement space.</td>
<td>- work conditioned by aesthetic requirements of gallery &amp; exhibits. - high skill and high consequence activities. - insufficient provision of purpose-specific equipment for manual handling. - unpredictable workloads - frequently short turnaround time.</td>
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<tr>
<td>Installers and curators</td>
<td>- dressed mannequins unbalanced; hand grips are limited; contact with textiles must be minimized to avoid damage. - work materials are valuable &amp; often fragile. - difficult reaches to plinth heights, exhibition cases, fitting to support pins, etc. - absence of purpose-specific equipment for handling and moving mannequins.</td>
<td>- inconsistent and unpredictable physical demands. - need to ensure white, blemish-free surfaces. - restricted movement &amp; exhibition spaces.</td>
<td>- work conditioned by aesthetic requirements of gallery &amp; exhibits. - high skill &amp; high consequence activities. - insufficient provision of purpose-specific equipment for manual handling. - public safety issues. - unpredictable workloads - frequently short turnaround time.</td>
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