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INSTITUTE OF OCCUPATIONAL MEDICINE

PILOT PROJECT- RISK ASSESSMENT AND CONTROL OF WORKPLACE STRESS

by

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EXECUTIVE SUMMARY

The Institute of Occupational Medicine (IOM) developed an Organisational Stress Health Audit (OSHA) to identify and control sources of stress in the workplace. The Health Education Board of Scotland (HEBS) commissioned the IOM to assess the feasibility in terms of cost and acceptability of applying the OSHA in Scottish workplaces. A further aim was to provide the basis for a research proposal to undertake a larger, controlled trial of the approach. Additional financial support for the study was provided by Lothian Health Board and the East and Mid Lothian NHS Trust.

The OSHA is a cross-functional, top down, primary intervention acting at the organisational rather than the individual level. Therefore, the approach sought to ensure that staff at all levels within the organisation were represented, and included as many different disciplines as possible. It is also consistent with the risk management control cycle framework adopted for most other health and safety hazards.

The OSHA is a three-stage approach to stress management at source, covering hazard identification, risk assessment, review of existing control measures, recommendations for improved control, and evaluation of control. Stage I provides an organisational overview by identifying the presence or absence of work-related stressors and opportunities for risk reduction. Stage II focuses on investigating in more detail areas of concern identified in Stage I. Stage III involves assessing the extent to which actions identified in Stages I and II have been implemented and their effectiveness in reducing organisational stress. The development and traceability of the IOM OSHA are outlined in this report. In this study, Stages I and II were applied in three organisations.

Background information provided by the company was used to develop semi-structured interview questionnaires for Stage I. These questionnaires were designed to identify potential environmental, physical and psychosocial stressors. Interviewees were selected so that each level and department was represented, from Senior Management down. The interviews were conducted by experienced professional IOM personnel. A confidential written report was provided to each company.

In Stage II, the investigation conducted in each organisation was one where it was considered that intervention could help in the short term. In two of the companies, the focus was on a specific group of employees highlighted from Stage I as being under particularly high pressure due to issues of workload, staffing levels or job design. In the third company, Stage I had identified poor communication of change as an important stressor; so the Stage II investigation focused on examining the potential for improvements. Appropriate combinations of standard and purpose-designed questionnaires were applied to address these issues. As with Stage I, confidential written reports were provided to each company.

The main outcomes are presented in relation to the feasibility of six specific issues:

* recruitment of companies
* cross-functional, top-down approach
* risk assessment / management approach to organisational stress
* evaluation and documentation of the process
* pilot methods for evaluating its impact and outcomes
* development and implementation of the approach.

Companies with existing concerns about stress in the workplace were recruited, and this may prove to be the most effective means of recruitment. However, a larger study in the future would provide an opportunity to evaluate alternative recruitment methods. The approach chosen also ensured adequate representation of all grades of staff across various disciplines within the companies.This study has clearly demonstrated the feasibility of Stages I and II of the OSHA in identifying a range of work related stressors

across different organisations. Responses from companies clearly indicated that the approach has benefits in terms of effectiveness; minimal down-time and disruption; and limited costs of the process. Companies showed a willingness to implement recommendations made for risk reduction. A further study would allow a more detailed evaluation of the effectiveness of the risk reduction strategies.

A number of aspects have been identified regarding the development of a large scale controlled trial of the approach, one of which relates to developing tools / techniques which could be applied by organisations themselves (including small companies), particularly those with limited knowledge of occupational stress.

SCIENTIFIC SUMMARY

Background and Aims

Stress at work is increasingly recognised as a significant cause of sickness absence, with reported costs to industry of £1.3 billion per annum (Health and Safety Executive, 1993). The Institute of Occupational Medicine (IOM) developed an Organisational Stress Health Audit (OSHA) to identify and control sources of stress in the workplace. The Health Education Board of Scotland (HEBS) commissioned the IOM to assess the feasibility in terms of cost and acceptability of applying the OSHA in Scottish workplaces. A further aim was to provide the basis for a research proposal to undertake a larger, controlled trial of the approach. Additional financial support for the study was provided by Lothian Health Board and the East and Midlothian NHS Trust.

The Organisational Stress Health Audit

The OSHA is a cross-functional, top down, primary intervention acting at the organisational level. Therefore, the approach sought to ensure that staff at all levels within the organisation were represented, and included as many different disciplines as possible. It is also consistent with the risk management control cycle framework adopted for most other health and safety hazards. The OSHA is a three-stage approach to stress management at source, with hazard identification, risk assessment, review of existing control measures, recommendations for improved control, and evaluation of control all embodied in it. The aim of Stage I of the OSHA is to provide an organisational overview by identifying the presence or absence of work-related stressors and opportunities for risk reduction. Stage II focuses on investigating in more detail areas of concern identified in Stage I, e.g. a group of employees operating under particularly high pressure, or a specific issue such as communication of change. Stage III involves assessing the extent to which actions identified in Stages I and II have been implemented and their effectiveness in reducing organisational stress. The development and traceability of the IOM OSHA are outlined in this report.

Outline of Work Programme

In this study, Stages I and II were applied in three organisations. Each company appointed a co-ordinator to assist with recruitment of personnel and scheduling the work. The company contact also provided background information about the organisations' organisational structure, policies, processes, pattern of workforce, sickness absence / staff turnover and health and safety issues. The co-ordinator was also part of a steering group, comprising representatives of senior management, line managers and employee representatives, established to ensure that all parties were aware of the study and were able to contribute to the work programme. The Company contact used various methods to recruit participants, i.e. personal contact, e-mail and cascade / team briefings, each having advantages and disadvantages.

The background information, provided by the company contact, was used in the development of semi-structured interview questionnaires for Stage I. Each questionnaire was tailored to the position, function and likely knowledge / experience of the individual to be interviewed, and also took account of relevant issues within the company. The interview questionnaires were designed to identify potential stressors, characterised as Environmental (organisation's structure, work characteristics, policies), Physical (work characteristics, policies) and Psychosocial (human resource management, individual factors, management structure). Interviewees were selected to ensure that each level and department was represented, from

Senior Management down. The interviews were conducted by IOM Occupational Psychologists and an Occupational Physician, as appropriate, and recorded on audio tapes. These tapes were transcribed, and the information collated and summarised by the interviewers. This was then discussed by an IOM multi-disciplinary team, a procedure which provided a comprehensive overview of the results and facilitated the production of a confidential written report for each company (a specimen report is included as an Appendix). Each report was also presented and discussed at a feedback meeting, together with recommendations for Stage II.

In Stage II, the investigation conducted in each organisation was one where it was considered that intervention could have helped in the short term. In two of the companies, the focus was on a specific group of employees highlighted from Stage I as being under particularly high pressure due to issues of workload, staffing levels or job design. In these cases, semi-structured questionnaires were developed by IOM following a process meeting with representatives of the focus group. These formed the basis of interviews (conducted by the same interviewers as in Stage I) with individuals from this group, together with others who interacted with them. These personnel also completed three self-administered standard questionnaires i.e. the General Health Questionnaire (GHQ-12), the Stress Anxiety Questionnaire (SAQ) and the Work Environment Scale (WES). In the third company, Stage I had identified poor communication of change as an important stressor; so the Stage II investigation focused on examining the potential for improvements by means of an attitudinal survey. This involved several employee groups completing a self-administered questionnaire, developed by the IOM for this study, and a Team Climate Inventory, to assess team working and potential sources of resistance to change.

All results in Stage II were analysed with reference to data provided by the designers of each standard questionnaire and / or data obtained for comparison employee groups within the organisation. As with Stage I, confidential written reports were provided to each company, but no feed-back presentations were made because of time constraints. Summary findings of the Stage II investigations are presented in an Appendix.

After each Stage, questionnaires were distributed to company contacts and participants to canvass their views on the OSHA approach.

Main Outcomes

It was essential for HEBS that the study addressed six specific elements. The main outcomes in relation to these issues are summarised as follows.

1. Recruitment of companies

HEBS originally wished the study to include an examination of the advantages and disadvantages of various recruitment methods. However, the relatively short timescale of the project did not permit this; swift recruitment was necessary, and this was achieved via established links between either IOM or HEBS with organisations who had already expressed concerns about stress. Effective communication of the approach which embodies the OSHA is essential, focusing on the benefits highlighted by the three participating companies in this study e.g. minimal disruption, flexibility and effective assessment.

The companies recruited represent both public and private sectors, and industrial and service sectors. They varied in size and complexity, from those employing several hundred to several thousand, and operating from one to several sites. Within each, there was a diversity of function and age ranges represented. The organisations had variously experienced upsizing, downsizing and restructuring, with consequent differences in uncertainty over future employment. The relative importance of specific health

and safety issues also varied across the organisations.

2. *Cross-functional, top-down approach*

The study demonstrated that it was, in practice, possible to ensure a cross-functional and top-down approach for each of the companies taking part. Involvement of senior management in the interview process ensured commitment from the top to the whole exercise and comprehensive coverage of all aspects of organisational policies and procedures. The use of company contacts generally facilitated the recruitment of personnel, ensured the smooth running of the investigations, and maintained feedback on progress within the organisation. The commitment of the company contact was a significant factor in determining the rate of progress of the investigations, and this was evident in the differences observed between the three organisations. The use of a systematic approach (based upon an organisational chart for the company involved, the need to ensure that all sectors of the company were represented, and the use of skilled interviewers) minimised the potential for selection bias by contacts or senior staff within the organisation. The benefits of holding process meetings prior to commencement of Stage I, and involving more employees at this stage, became increasingly apparent as the study progressed.

3. *Risk assessment / management approach to organisational stress*

Risk assessment/management strategies are applied to most other occupational health and safety hazards, and therefore it was felt that companies would be familiar with this approach, and address the hazard of occupational stress more appropriately. The feedback from company contacts and other personnel within the companies suggests that the two Stages of the OSHA that were conducted were effective in identifying organisational stressors, areas / groups at high risk and recommendations for risk reduction. The three companies exhibited several work-related stressors in common, of major concern, including: workload and pressures to deliver services; uncertainty about the future in relation to job security; lack of resources (financial / staffing); and poor communication or lack of consultation on relevant issues. Companies showed a willingness to implement recommendations, but the extent to which these were implemented and the opportunity to evaluate their impact were limited by the restricted timescale of the study.

4. *Evaluation and documentation of the process*

The response from companies clearly indicated that the approach has benefits in terms of effectiveness, minimal down-time and disruption, and limited costs of the process. The OSHA has also proved to be flexible across industry sectors; across different circumstances of change; and within individual companies where interviews or questionnaires could be modified to address specific factors.

Information on potential occupational stressors collected during Stage II was found to support that collected in Stage I, despite different tools or techniques being used in each Stage; different groups within the organisation being assessed; and different individuals being involved, thus providing a degree of validation of the methodology. Participants in the study felt that they were able to address some issues raised themselves, but felt that some issues were outside their area of knowledge in relation to organisational issues.

Careful documentation of all aspects of the work has taken place throughout the project. Much of this is contained in this report and in addition, comprehensive and confidential reports on each Stage have been provided to the participating companies.

5. *Pilot methods for evaluating impact and outcomes of the approach*

Companies were taking steps to implement specific recommendations e.g. review of policies or

procedures, changes in work design, or improving sickness absence monitoring. Evaluation of the impact and outcomes of the recommendations made, however, was limited by the time constraints of the project. This is really an objective of Stage III of the OSHA. However the process was evaluated by sending questionnaires to participants and company contacts. The information collected included assessments of the usefulness and appropriateness of the methodology in identifying relevant sources of occupational stress, the time and resources required by the organisation, and the quality of the information provided by the IOM. For the two Stages of the OSHA which were completed, the response from companies, as to their benefits, was positive (as already mentioned).

6. Development and implementation of the approach

At present, the effective application of the OSHA depends on accurate data collection and analysis by interviewers trained in relevant disciplines such as psychology. Standard structured interview shells were produced, but the detailed content was modified for each organisation and also during the interview schedule. This was possible due to the interpretive skills of the trained interviewers. This inherent flexibility allowed emerging issues to be fully explored and is a vital element in the success of the approach. Other important elements include the multi-disciplinary team approach and its independence, both in analysing the data which is collected and in providing recommendations for further investigation, or for risk reduction, which are appropriate and practical for the particular company.

Conclusions

The main aim of this pilot project was to assess the feasibility, in terms of cost and acceptability, of developing the risk assessment / hazard control approach to workplace stress in Scottish workplaces, with emphasis on the private sector. This study has clearly demonstrated the feasibility of Stages I and II of the OSHA in identifying a range of work - related stressors across different organisations. Companies showed a willingness to implement recommendations made on risk reduction measures. It is concluded that the OSHA may be used successfully in other companies within either the private or public sectors.

A second aim of the study was to provide a basis for developing a larger scale controlled trial of the approach. This project has identified a number of aspects which could be incorporated in such a study, including:

- conducting Stage III in the companies which participated in this pilot study to assess to what extent recommendations from Stages I and II have been implemented and their impact, and identifying new stressors (if any);

- extending coverage to more companies to increase the range of systems and practices identified as being beneficial in reducing levels of organisational stress and related factors, thereby developing a database of good practice which could assist other organisations nationally;

- assessing the feasibility of applying Stage II, either alone or followed by Stage I and / or III, in situations where companies have already identified high risk groups;

- evaluating the effectiveness of different methods of recruitment;

- developing and validating tools / techniques which could be applied by organisations themselves (including small companies), particularly those with limited knowledge of occupational stress. These could include a checklist to aid identification of workplace stressors, and improved software packages for recording and monitoring sickness absence data and which are flexible enough to be

used across a range of industries. These, together with `good practice' risk reduction measures and other information, could be used to improve guidance and training for management, supervisors and other employees.

It is felt that all of these recommendations are of equal value, and that all can be ultimately achieved by a larger scale controlled trial of the approach, and by revisiting participating companies to evaluate the effectiveness of risk reduction measures. A larger trial would also allow an evaluation of the effectiveness of different methods of recruitment, and the establishment of a 'good practice' database, which could be used to provide advice and support for smaller companies.

1. INTRODUCTION

The spiralling costs of workplace stress, in both financial and human costs, have become increasingly well documented in recent years. With costs to British industry of £1.3 billion per annum (Health and Safety Executive, 1993), the call for control and prevention techniques to address work-related stress has resulted in the development of various research initiatives to identify best practice within this area.

Unlike many of our European counterparts, UK Legislators have not as yet produced any stringent mandates with respect to work-related stress, due to the current state of knowledge concerning the subject. Although an extensive amount of research has been undertaken to identify the principal 'stressors', little is known about the net effects of combined exposures. As Levi (1984) notes, one of the primary questions within this area of work relates to whether stressors are superimposed on each other in an additive or synergistic way. Unlike many other health and safety related issues, direct causal links have not yet been established. Cox (1994), whilst in agreement that knowledge is not yet sufficient to justify comprehensive and detailed legislative controls for workplace stress, suggested that it should be possible to formulate general principles and guidance within the existing health and safety framework.

In 1992, in response to an obvious need to provide guidance for both UK employers and employees, the Health and Safety Executive (HSE) commissioned the Centre for Organizational Health and Development, University of Nottingham to provide an overview of the scientific literature relating to the nature and health effects of work stress and to the nature and effectiveness of stress management programmes. The result of this work was a comprehensive document published in 1993 which critically appraised the various stress management programmes in current use. Of the three approaches to stress management assessed, 'interventions aimed at identifying and controlling sources of stress in organisations' emerged as the most promising. The author of the review, (Cox), went on to propose its incorporation within the framework of the assessment and control cycle already introduced to minimise physical health and safety risks.

On the basis of this work, the Health Education Board for Scotland (HEBS) issued an invitation to tender for a pilot project on the reduction of workplace stress at source. Previous needs assessment work commissioned by HEBS had identified a number of key areas for development, of which stress was identified as a priority. The Management Executive of the NHS in Scotland and the Scottish Needs Assessment Programme (SNAP) both identified the promotion of mental health in the workplace as a priority which supported the need for further work in this area. Subsequently, in June 1996, HEBS commissioned the Institute of Occupational Medicine (IOM), Edinburgh to undertake a pilot project entitled 'Risk assessment and control of workplace stress'. Lothian Health Board (Health Promotion department) provided additional financial support. This report describes the aims, work programme and results of this project.

1.1 Aims

The aims of the project are twofold. Firstly to assess the feasibility of developing the risk assessment and hazard control approach to workplace stress in Scottish workplaces, with an emphasis on the private sector; and secondly to provide the basis for a research funding application to undertake a larger scale, controlled trial of the approach. The invitation to tender identified six objectives in fulfilling the stated aims:

1. To recruit two to three organisations to participate in the pilot project.

2. To work with all levels and interest groups within the organisations in order to assess the feasibility

of developing the risk assessment and hazard control approach.

3. To develop and pilot methods for identifying and implementing the organisational changes required to control stress hazards.

4. To evaluate and fully document the processes involved in recruiting participating organisations and in identifying and implementing the organisational changes required.

5. To pilot methods for evaluating the impact and outcomes of the risk assessment and hazard control approach.

6. To produce detailed recommendations about appropriate ways of developing and implementing the approach.

1.2 Existing philosophy on assessment and control of workplace stress

Several literature reviews have been carried out in recent years in an effort to evaluate the effectiveness of occupational stress management programmes e.g. Newman & Beehr (1979), DeFrank & Cooper (1989) and more recently a publication by the HSE, (1993), entitled "Stress Research and Stress Management: Putting Theory to Work". Conducted by Tom Cox of the Centre for Organisational Health and Development at Nottingham University, the latter document was aimed at providing an overview of the scientific literature relating to the nature and health effects of work stress and to the nature and effectiveness of stress management programmes.

In addition to providing a thorough review of the literature, the document also supplied an overview of the current legal position with regard to stress as a work-related issue. The Health and Safety at Work Act (HSWA), 1974, which is the statutory framework determining employers' responsibilities for health and safety, is concerned with employees' psychological as well as physical well-being. However, a Confederation of British Industry (CBI) (1994) survey showed that whilst 90% of companies consider the mental health of employees vital to competitiveness, only 12% have a programme to deal with the problem, a situation as illustrated in Figure 1.1.

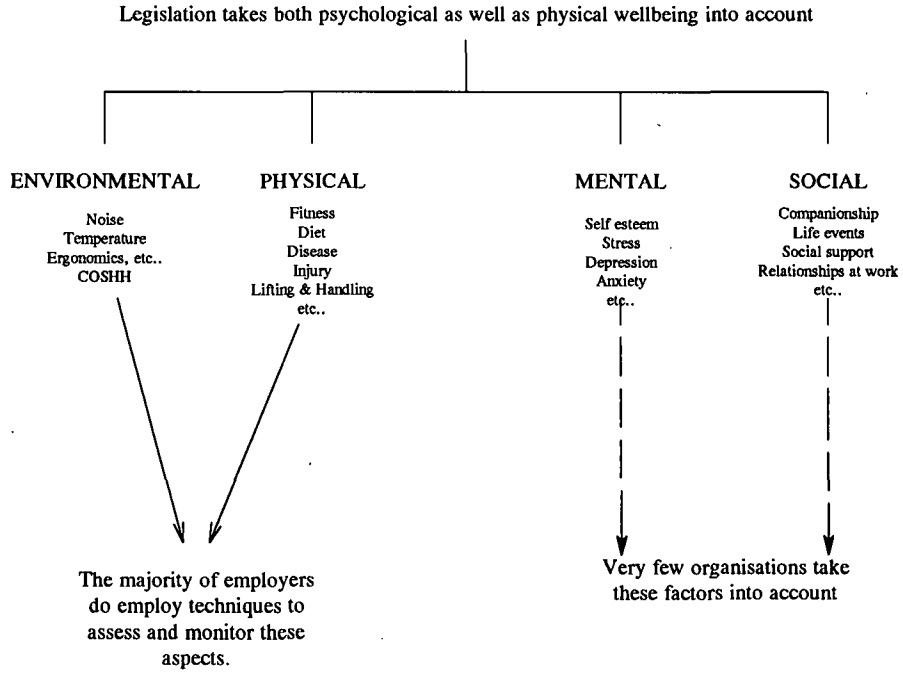

Fig 1.1: A general picture of UK company compliance with current Health & Safety Legislation

The HSWA implies a systematic approach to hazard control and risk management, an approach which is also explicit in the Control of Substances Hazardous to Health Regulations (COSHH), 1988, and other recent regulations. The risk management approach incorporates six stages in a continuous cycle:

1. Identification of hazards
2. Assessment of associated risk
3. Implementation of appropriate control strategies
4. Monitoring of effectiveness of control strategies
5. Re-assessment of risk
6. Review of information needs, and training needs of workers exposed to hazards

The overall philosophy of such a risk management approach entails controlling hazards at source, rather than treating the effects of hazards. This concept is embodied within certain stress interventions. Murphy (1988) cited the following three common types of intervention, which Cox (1993) evaluated:-

1. Tertiary: employee assistance (largely focused on the provision of counselling)

2. Secondary: worker training (either in the form of health promotion or psychological skills)

3. Primary: some form of organizational or work development which attempts to reduce stressors ie. control hazards - (including work design and ergonomics)

Despite a mass of literature on the subject, the relative effectiveness of stress management programmes has been difficult to determine, largely because of methodological deficiencies inherent in much of the relevant research and lack of adequate evaluation. Research relating to tertiary interventions such as Employee Assistance Programmes (EAPs) relate largely to companies in the United States rather than Europe, although there has been a tendency in recent years for UK companies to adopt such programmes.

One of the primary hurdles in evaluating the effectiveness of EAPs relates to the confidentiality issue of employee participation. Murphy et al (1992) highlighted the delicate balance between assisting individuals and protecting and promoting the interests of the organizations. In terms of how effective EAPs are in ameliorating work-related stress, evidence from an evaluation of a pilot scheme by Cooper et al (1992a, 1992b) highlighted that, whilst counselling was effective in improving self-reported psychological health and absence from work, job satisfaction and organisational commitment remained unaffected.

With respect to secondary level interventions, ie stress management training, evidence for accrued benefits has been provided by Murphy (1984) who reviewed thirteen studies on personal stress management. The techniques employed ranged from relaxation to behavioural therapy. A number of significant benefits such as improved physiological functioning, somatic and work capabilities were highlighted when such techniques were adopted. However, evaluation problems however were expressed concerning the self-report measures used.

Primary intervention, which acts at the organisational level, has been identified by many researchers including Murphy (1988) and Cox (1993) to be the most promising area for effective interventions. Research by Wall & Clegg (1981) and Jackson (1983) indicated improvements in actual work characteristics such as role ambiguity and role conflict when companies employed a primary control approach. However, whilst these methods do address the source of the problem, they also require the most commitment from an organisation. To undertake an intervention approach at this level there is a requirement for both a detailed audit of work stressors and a knowledge of both the organisation and the climate in which it is operating.

In summarising the effectiveness of these three types of interventions, Cox (1993) stated that whilst there is not yet sufficient information to be confident about the nature and extent of its effectiveness, stressor reduction/hazard control is for several reasons the most promising area for intervention. This view is shared by a growing number of experts operating in this field. Whilst in the past, stress has often been considered a personal problem to be tackled with remedial, occasional and often palliative interventions, the emerging approach focuses on a pro-active response to stress, with emphasis on preventative measures and elimination of the causes of stress, rather than on the treatment of its effects. As Levi (1984) aptly points out "an ounce of prevention is worth a pound of cure".

The approach adopted by such primary intervention techniques fits in well with the risk management control cycle framework adopted for most other health and safety hazards. By adopting this approach, work-related stress is removed from the more subjective, arbitrary, field of research, into a more tangible step-by-step management approach. Cox (1993) elaborates on this by presenting a risk management control cycle for the management of stress, (Table 1).

Control Cycle and the Management of Stress	
(1)	Acceptance that employees are experiencing problems or stress at work.
(2)	Analysis of the possibly stressful situation, with the identification of the psychosocial and other hazards involved, the nature of the harm that they might cause and the possible mechanisms by which the hazards, the experience of stress and the harm are related.
(3)	Assessment of the risk to health associated with those hazards and the experience of stress.
(4)	Design of reasonable and practicable control strategies.
(5)	Planned implementation of those strategies.
(6)	Monitoring and evaluation of the effects of those strategies feeding back into a re-appraisal of the whole process

Table 1.1: Control cycle and the management of stress (Cox 1993)

As with any health and safety issue, although more so with stress due to the lack of stringent legislation, there is a real need for organisational commitment. Ivanevich et al (1990) and Kompier (1993) both emphasise the need to gain the support of senior management when implementing stress management programmes. Prior to starting a work-related stress reduction project, commitment and organisational resources (budget etc) should be created. Another key issue entails cooperation between the several 'company parties' (all levels of management, employees, trade union and personnel dept etc). It has been found in past research that if there is a lack of commitment from these parties then there is a good chance that a stress reduction project will not be successful.

In summarising the current state of knowledge on stress management, Cox (1993), cited the following issues as requiring further research:
(a) the lack of application of theory to practice,
(b) the lack of adequately designed and meaningful evaluation studies, and
© the lack of balance between the number of individually focused and organisationally focused interventions.

The most recent work carried out on evaluating the effectiveness of stress management programmes, Hek & Plomp (1997), agrees, both with the primary approach as offering the best way forward, and also the issues which still require further research.

2. OUTLINE OF WORK PROGRAMME

2.1 Aim

To assess the feasibility of a risk assessment and hazard control approach to workplace stress, and provide a basis on which to undertake a larger controlled trial of the approach.

2.2 Background

The Organisational Stress Health Audit (OSHA) was developed by the IOM to address workplace stress at source.Details of the OSHA development can be found in Chapter 3, and Appendix 1 provides evidence for the traceability of this approach.

2.3 Recruitment of Organisations

Three organisations were involved in the research: two were from the private sector (heavy engineering-downsizing; and utility - up sizing) and one from the public sector, a National Health Service Trust. This allowed comparisons to be made between Public -v- Private, Industrial -v- Service Sectors and Downsizing -v- Upsizing organisations. All three organisations were recruited on the basis of personal contact with the IOM, due to their concerns about work-related stress, and therefore 'cold' recruitment was not necessary. The nature of recruitment was consistent across companies, and proved effective as the companies were committed to addressing the issue of organisational stress. However a larger controlled trial of the approach would allow an evaluation of different methods of recruitment.

2.4 The OSHA

The OSHA was designed as a three tiered approach to identifying organisational stressors and managing risks.

Stage I is described in detail in Chapter 5. Data for each organisation were collected by semi-structured interviews using a top down approach. Each level and/or department was represented, allowing all areas of the organisation to be audited.

Stage II (Chapter 6) is a detailed investigation of a specific area of concern highlighted by data collection and analysis from Stage I. The specific methodology used in Stage II is therefore dependent on the outcome of Stage I.

Stage III is an evaluation of the impact of Stage I and II and involves an assessment of the extent to which recommendations have been implemented and the effectiveness of these measures in reducing organisational stress.

Stage III was limited by the timescale of this feasibility study, but post-work programme questionnaires were sent to all organisations participating. Organisations' evaluation of the OSHA is given in Chapter 7.

2.5 Work Programme

After recruitment of the three organisations, the work programme proceeded as follows:

(a) Request background information from each organisation as described in Chapter 4.

(b) Prepare and conduct semi-structured interviews (Stage I)

(c) Analyse Stage I data and report with recommendations (See Appendix 2 for a specimen report)

(d) Prepare and conduct Stage II

(e) Analyse Stage II data and report with recommendations (Appendix 4)

An IOM multidisciplinary team was formed for the purpose of analysis and reporting. The team included the interviewers (Occupational Psychologists, Occupational Physician), Senior Line Managers (eg. Board Members, Finance and Personnel) and a Senior ergonomist. Individual reports were submitted in confidence to the organisations. Template reports are provided in this document as indicated above.

2.6 Assessing Feasibility

Chapters 8 and 9 discuss the feasibility of the approach and outline recommendations for further research.

3. DEVELOPMENT OF RESEARCH APPROACH

3.1 Background to the OSHA

Prior to the HEBS invitation to tender and largely arising from client needs, an IOM internal working group developed and piloted Stage I of the OSHA to specifically address prevention and control of work-related stress. This focus is consistent with HSE's philosophy of addressing all health and safety issues in terms of eliminating or minimising hazards at source rather than treatment of the effects of the hazard, although this latter approach is also necessary.

The first stage in developing the OSHA was to conduct a literature review to formulate a database of validated work-related stressors. Appendix 1 lists publications tabulated chronologically in relation to each of: organisational characteristics (structures, processes and policies); job demands and work characteristics; and individual (characteristics, expectations and incidents). In general, there is a high level of consensus concerning those psychosocial hazards of work considered to be potentially stressful.

Cox (1993) provides a comprehensive list of acknowledged stressful work characteristics (Table 3.1), subdivided by work context and content. This is used by HSE as a guidance checklist when employers and employees ask them for information on stress-related factors. This list also incorporates the home/work interface which is a potential source of stress, but other organisational factors such as physical and environmental hazards, and the impact of industry specific pressures and policies also need to be considered. The interaction between physical and psychosocial hazards in the workplace is complex, and employees may more readily report health concerns about physical hazards as these are seen as more 'acceptable' or more likely to be resolved than psychosocial concerns. It is essential that an organisational audit includes all these factors.

The OSHA therefore addresses the following aspects of work-related stress: environmental, physical, mental and social (Kompier, 1993). This approach was highlighted in Figure 1.1 of the introductory chapter. It was also felt that organisations familiar with a risk assessment, hazard control approach (eg. Control of Substances Hazardous to Health Regulations 1988, Management of Health and Safety at Work, 1992) would more readily address the issue of occupational stress when placed within a health and safety framework.

3.2 IOM Model

The model from which the Stage I interview was constructed is shown in Figure 3.1. Utilising the information gathered from the literature review the potential organisational stressors were categorised as illustrated. Each of these categories was included as a section within the semi-structured interview. In keeping with a health and safety approach it was intended to focus on the organisation's awareness of these issues by determining whether specific policies and systems had been developed and implemented to address key issues such as effective communication, staff support, and safe systems of work. The sections included in the model also cover the areas listed above (Figure 1.1) ie. Environmental (organisation's structure, work characteristics, policies); Physical (work characteristics, policies); Psychosocial (Human Resource Management, Management Structure, Individual factors). There is inevitably overlap between these sections, for example work characteristics also impact on psychosocial factors.

It was also anticipated that the quality of data available would vary between organisations and that some data may underestimate workplace stressors. For example, monitoring trends in sickness absence can be

Table 3.1: Psychosocial hazards at work (Cox, 1993)

	WORK CHARACTERISTICS	CONDITIONS DEFINING HAZARD (Demands, Control & Support)
CONTEXT	Organisational function and culture	Poor task environment and lack of definition of objectives Poor problem solving environment Poor development environment Poor communication Non-supportive culture
	Role in organisation	Role ambiguity Role conflict High responsibility for people
	Career development	Career uncertainty Career stagnation Poor status or status incongruity Poor pay Job insecurity and redundancy Low social value to work
	Decision latitude/control	Low participation in decision making Lack of control over work Little decision making in work
	Interpersonal relationships at work	Social or physical isolation Poor relationships with superiors Interpersonal conflict and violence Lack of social support
	Home/work interface	Conflicting demands of work and home Low social or practical work at home Dual career problems
CONTENT	Task design	Ill defined work High uncertainty in work Lack of variety or short work cycles Fragmented or meaningless work Underutilisation of skill Continual exposure to client/customer groups
	Workload/work pace	Lack of control over pacing Work overload or underload High levels of pacing or time pressure
	Work schedule	Shift working Inflexible work schedule Unpredictable work hours Long or unsocial work hours

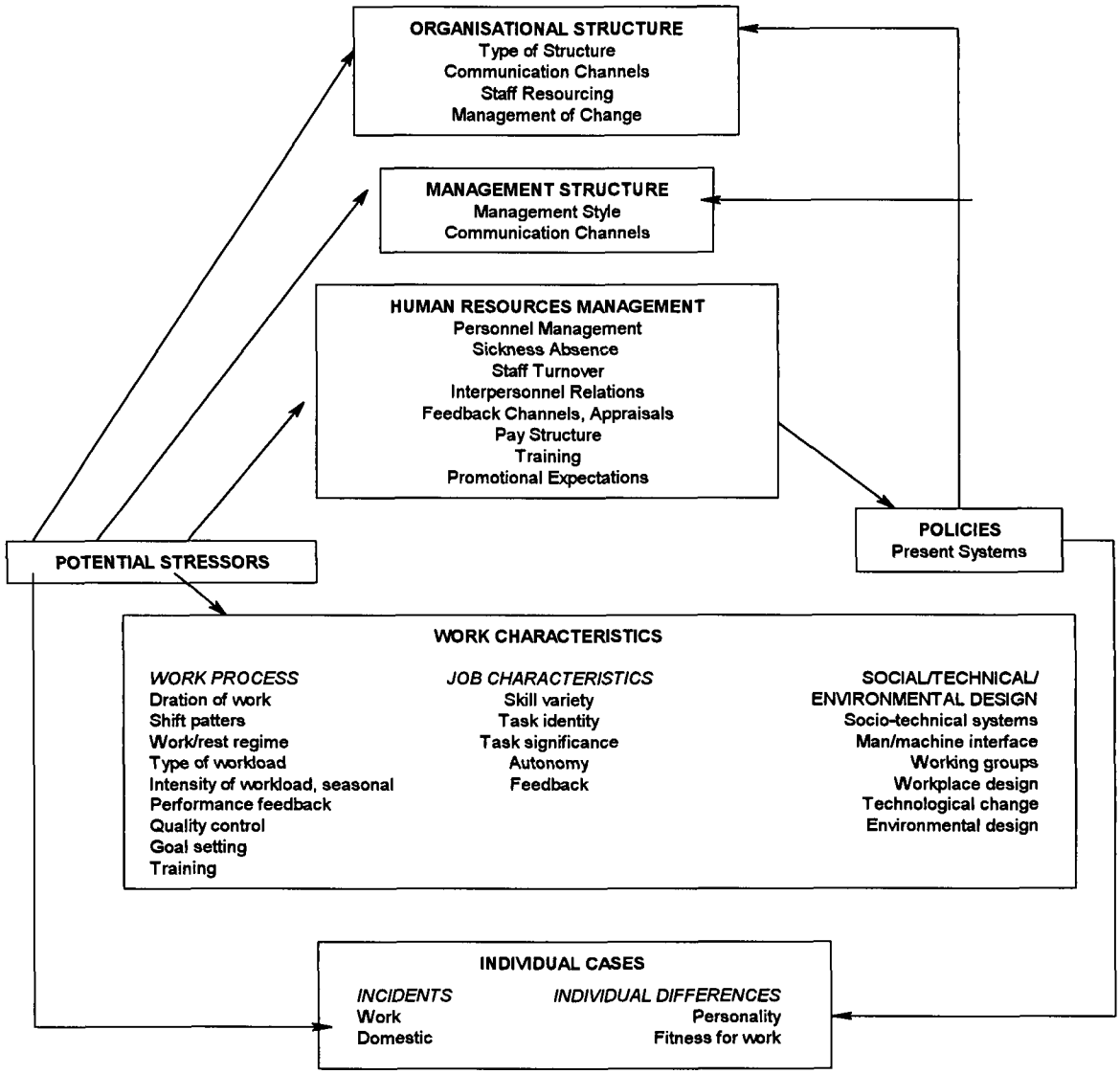

Figure 3.1: IOM model

used to assess the prevalence of work-related stress. However, employees are still reluctant to have this diagnosis recorded on sick notes, due to fears of an unsympathetic response from employers, and therefore cases of work-related stress may not be accurately documented.

As Stage I was intended to provide an organisational overview, it was acknowledged that data collection on individual factors would be limited for this stage, but would form an important component of Stage II data.

3.3 Framework for Stages I and II

Questions were then formulated for each of the subsections in Figure 3.1 to ensure that all potential stressors were included in the framework for Stage I, which is intended to identify the presence or absence of work-related stressors and recommend opportunities for risk reduction.

As stated above it was intended that Stage I would be applied across the organisation using a top-down approach ensuring that each level and/or department was represented and so allowing all areas of the organisation to be audited.

Figure 3. 2 illustrates the range of personnel selected from one company (Company A). It should be borne in mind that this organisation had approximately 2000 employees. The extent of coverage possible for Stage I is dependent on the size and complexity of the organisation. In general, we would seek to interview the following: Managing Director, Directors (2-3), Personnel Manager, Senior Managers (6), Line Managers (8), Employee Representatives (10-20).

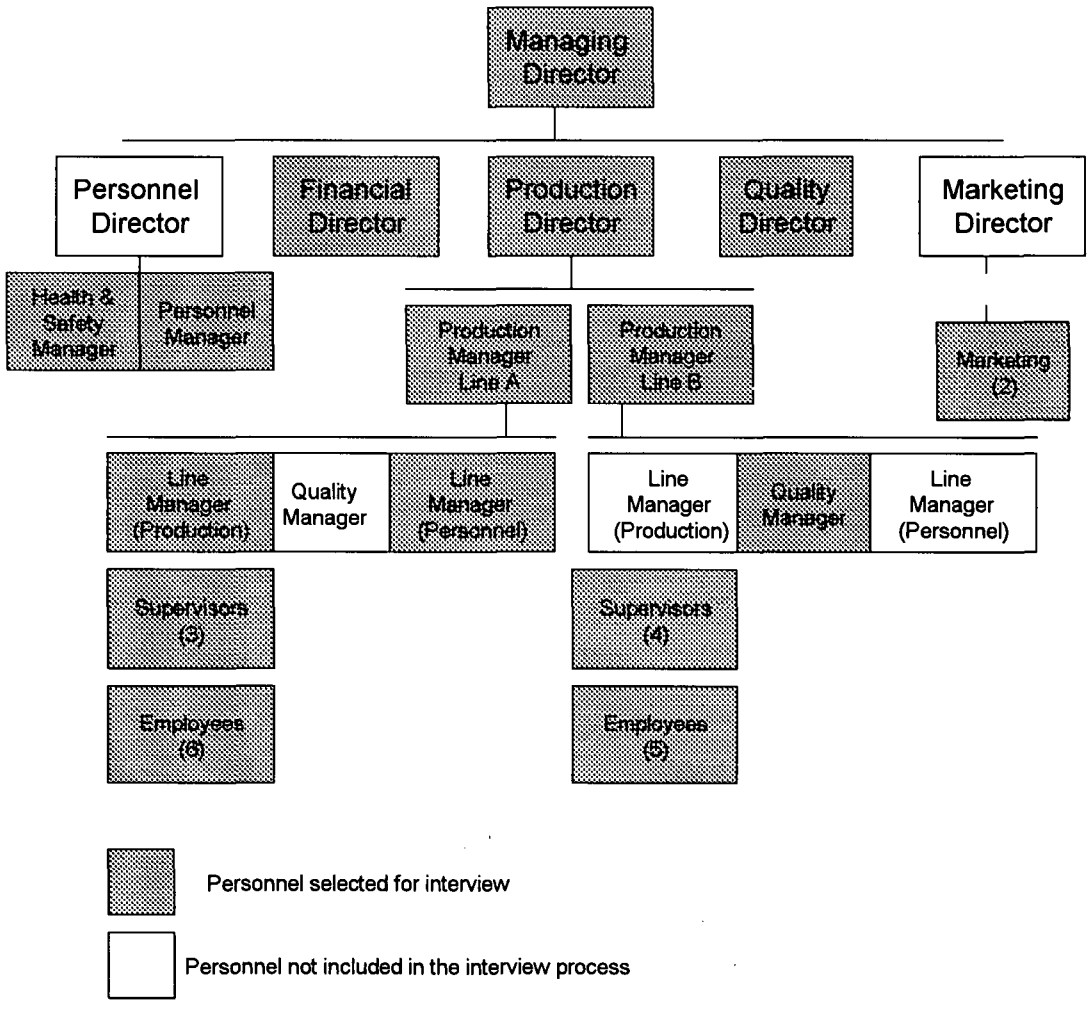

Figure 3.2: An example showing the spread of personnel selected for interview

Due to the size and complexity of Companies B and C it is not possible to easily demonstrate diagrammatically how individuals were selected from various groups or departments within the company. However, in each case the selection process ensured that the widest range possible of different employee groups were represented, and that all grades of staff within each of the groups were included in the survey.

It was acknowledged that the specific design of Stage II would be dependent on the outcome of Stage I. It was intended to focus on stressors identified from Stage I and groups of employees considered to be at at highest risk as a result of these stressors.. Where appropriate semi-structured interviews would be used based on the Stage I approach, but focusing in more detail on specific stressors identified. However, in some circumstances it might be more appropriate to use a questionnaire approach either using currently available tools such as the General Health Questionnaire (GHQ, Goldberg 1981), or to develop a questionnaire to address specific needs. Training or risk assessment programmes might be appropriate in some circumstances. The Stage II methods used in the three participating organisations are discussed in Chapter 6.

Where organisations have already identified employees who are under more pressure, it is felt that application of Stage II in isolation would be appropriate. The methodology suggested above would also ensure that even within Stage II wider organisational issues would be highlighted and could be addressed appropriately. In this study we did not seek to apply Stage II first.

Stage III, although not covered within this study, is seen as an essential part of the OSHA. It is intended that evaluation of the impact of Stages I and II would be carried out at suitable intervals following implementation of recommendations from each Stage. It is hoped that organisations would wish to participate in regular audits to review the continued effectiveness of these changes and to ensure that future stressors were identified and actions taken at an early stage.

4. COMPANY RECRUITMENT AND AUDIT PREPARATION

4.1 Recruitment of Participating Companies

The organisational sectors from which companies were recruited was largely determined by the aims specified in the HEBS tender: '2 to 3 Scottish organisations, with an emphasis on the private sector'. Due to a number of existing IOM clients requesting assistance with work-related stress there was no need to actively recruit companies for the study. Although this was beneficial given the limited timescale, the logistics of 'cold' recruitment could not be assessed.

The two private sector companies who participated were both recruited through their Occupational Health Departments. Company A (heavy engineering) was recruited by the IOM occupational physician contracted to provide an Occupational Health Service to the company.

Contact with Company B (a newly established private sector utility) was initiated through the HEBS contact and followed up by the IOM project manager. Discussions were held with the Chief Medical Officer of the parent company who delegated coordination of the exercise to the Human Resource Manager of the subsidiary company.

Following recruitment of companies A and B, the IOM was approached by the Health Promotion Department of the local health board. The two organisations have established links and Lothian Health were therefore aware of the IOM project. They were keen to be involved in the project as a continuation of an initiative entitled 'The Healthy Workplace Strategy'. Additional funding was provided by Lothian Health(Health Promotion Department) and a local NHS Trust (Company C) which allowed the recruitment of the third organisation.

4.2 Set-up Procedures

4.2.1 Function of company contact

It was essential that the semistructured questionnaires used in Stage I were tailored to the organisational sector to be interviewed, and took account of relevant issues within that organisation.

In order to facilitate this process a coordinator was requested from the client company. The company contact had to be committed to the work and in a suitable position in the organisation to assist with recruitment of personnel and scheduling of interviews.

The company contact was also tasked with collecting background information about the company which would assist the IOM team preparing the interviews. Details of the information requested are given below.

4.2.2 Company documentation

Prior to preparing the Stage I interview questionnaires, a `profile' of the company under study was obtained. This information was collected in order to provide an overview of the size and complexity of the organisation, financial viability, attitudes towards health and safety, and personnel issues. In addition information was collected on factors which have been shown to be indicative of workplace stress, such as high sickness absence rates and high staff turnover. This information acted as a baseline on which to develop semi-structured interviews which were specific to the needs of the company.

In order to develop such a profile, the following company documentation was requested:

Annual financial company reports
Policy statements
Schematic diagrams and information pertaining to actual `structure' of the organisation
Psychometric techniques in use for personnel/Management selection
Description of methods used for recording and monitoring Sickness Absence
Sickness absence rates/trends
Staff turnover rates/trends
Listing of Health and Safety Legislation undertaken by the company
Pattern of workforce:
- Number/ratio of male to female personnel (between sections and company wide)
- Span and number of personnel in various age groups
- Number/ratio of white to blue collar workers (departments)

In addition to providing a general picture of the company, the material was used by the IOM project team to determine additional questions for Stage I ie. to tailor the interviews to the specific company. It was generally found that the most important information was that detailing the structure of the organisation and the nature of its business. The information on sickness absence, turnover, recruitment and appraisal, and annual reports were not particularly useful in the detail that they were provided, or the format in which data was recorded by the company. In future, it may be more appropriate to obtain a brief outline of these issues from the company contact or other relevant personnel.

4.2.3 Steering group

In Companies A and C the company contact was part of a Steering Group comprised of representatives from senior management, line managers and employee representatives. The groups were established to ensure that all parties were aware of the work and were able to have input into the work programme.

In Company C, due to the size and complexity of the organisation, the Steering Group played an important role in overseeing the study and assisting the company contact in recruiting participants. In Company A the Steering Groups was updated on progress by the company contact but played a less active role throughout the study. Company B did not form a Steering Group, as they wished the survey to be coordinated by the Personnel Department. Based on our experience during this project it is felt that the active involvement of a Steering Group is beneficial and that this function should be further developed in future HEBS work.

It would also be useful to include a wider group of employee representatives within the Steering Group and to arrange a presentation by the IOM interviewers, of the OSHA approach, at the company prior to the work commencing. Employees who have a sense of 'ownership', are more likely to be committed to the work and are able to contribute valuable insights into development of the approach.

It is also recommended that a section of the Steering Group attend a 'process meeting' with the IOM team to ensure that specific details in the Company profile can be clarified. Process groups were used in Stage II to obtain detailed information about roles, responsibilities, reporting channels and relevant issues within specific areas of the company, and ensured that the content of interviews was as comprehensive as possible. With hindsight, such process group involvement would also benefit the work of Stage I.

4.3 Communication Channels

4.3.1 Between the IOM and the company contact

In companies A and B meetings were held between the company contact and the IOM project manager. The HEBS invitation to tender and the IOM proposal were provided as background information for the company contacts. A brief outline was given to each company of the plan of work and anticipated timescales for Stage I and II. This meeting also provided opportunity to request the company documentation discussed in Section 4.2.2, and allowed the opportunity for the company contact to obtain any further information about the nature of the survey.

In the case of the Health Board (Company C) the documentation was given to the Health Promotion Department who briefed the NHS Steering Group on the work. A meeting then took place between the Trust contact and an IOM team member. This resulted in a series of meetings with the NHS Steering Group which consisted of: the IOM team member, Health Promotion representatives, Trust Contact (Personnel Manager) and representatives from each Directorate within the Trust. The objective of the meetings was to obtain agreement on which areas of the Trust should be included in the project.

Due to the size and complexity of this organisation it was essential at the outset that there was an agreement on which areas of the Trust, in particular which Directorates would be included in the survey. As a result of the meetings a consensus view was reached, which ensured that both hospital and community based staff were included, and that a range of disciplines was represented. At the time of the survey some of the groups included were experiencing a significant degree of organisational change. Therefore, the survey also provided the opportunity to assess the impact of change within these groups.

4.3.2 Between the company contact and participants within the company

The methods of recruitment varied between the companies, for example: Company A used personal contact, Company B used e -mail and Company C used a cascade approach and team briefings.

There was no written protocol available for the company contacts. This led to delays in Company B where responsibility for recruitment was delegated to a third party and resulted in misunderstanding of the criteria for selection. In future, a written protocol should be provided in addition to the verbal communication with company contacts to facilitate understanding of the selection requirements. The protocol would list the number of participants required from different departments and levels in the company

Clearly there are advantages and disadvantages for each method (see table below) although the choice of method is to some extent dependent on the size and complexity of the organisation.

Method of Contact	Advantages	Disadvantages
Personal contact (Company A)	- proved to be effective in recruitment - participants likely to be those that are articulate and present representative view - recruitment progress easily monitored	- inconsistent brief - bias of selection - depends on motive of contact and how contact is perceived within organisation - may be limited by size of organisation
e-mail brief (Company B)	- consistent brief - suitable for large/complex organisations	- ineffective recruitment - dependent on perceived priority of the request - faceless/impersonal approach
newsletter cascade for participation brief by health promotion staff (Company C)	- wide awareness of nature and aims of project; demonstrating organisations commitment to issue of work-related stress - cascade potentially aimed at those who are articulate and present representative view - brief by health promotion staff gives consistent message	- cascade may be bias (depends on motive of contact) - self selection is a bias - time consuming to brief all groups. - cascade may introduce inconsistency into brief - involves more 'contacts' at each level of recruitment

The following chapter discusses how the information collected was utilised in preparing the Stage I interviews.

5. STAGE I INVESTIGATIONS

5.1 Aims

In accordance with Steps 1 and 2 of the COSHH risk assessment process illustrated in the introduction, the aims of the OSHA Stage I were to identify the presence or absence of work -related stressors and to recommend opportunities for risk reduction.

5.2 Methods

5.2.1 Selection of participants

The selection method varied across the three companies. For Companies A and B the company contact identified a sample of possible participants in each of the targeted departments. Individuals selected represented different levels or grades within the organisational structure, and included those whose knowledge and experience would provide a reasonable overview of the company. Individuals were informed of the nature of the study by the IOM, were invited to take part, and were willing to cooperate.

For Company C, members of the steering group, in conjunction with an IOM team member, agreed that all sectors (directorates and localities) should be represented in the study. The company contact had asked Senior Managers to highlight any groups which they felt were under particular pressure. This information, together with the judgement of the steering group, formed the basis of selection of focus groups in each directorate/locality. The selection method also varied between the focus groups. For some directorates a presentation of the work was given to employees by health promotion staff, following which volunteers were requested. For other directorates recruitment was achieved using a cascade approach through Departmental Heads.

The method used by Companies A and B may be regarded as introducing selection bias, with choice of participants being seen to reflect the preference of the company contact. However in view of time constraints it was important that the recruitment process was not too lengthy. It was also essential that the employees interviewed represented a cross-section of the functions and levels of responsibility within the organisation. The knowledge of the company contact was of great value in ensuring this aim was achieved.

The method of selection adopted by Organisation C reflects, to some extent, the size and complexity of the organisation. However, it is worth noting that several meetings were held with approximately 12 representatives in order to reach a decision on the focus groups. Whilst this level of involvement is desirable, it is not always feasible, due to time constraints on senior staff.

5.2.2 Preparation of semi-structured interviews

As discussed in the previous chapter, a company 'profile' was developed based on documentation provided by the company, and this was used to tailor the Stage I semi-structured interviews to fit the company being studied. The companies participating in the study were of varying size and complexity, and had differing problems in relation to factors such as staff turnover, sickness absence, and financial security. Each had differing priorities which needed to be acknowledged within the interview process.

In the next chapter we discuss the use of process meetings for gathering information about specific groups within an organisation. These meetings were used to assist in the planning of Stage II, and with hindsight, it is felt that such an exercise would add to the quality of the information gathered during the preparation

of Stage I.

The different sections of the interview have been described in Chapter 3. It was assumed that knowledge of each of these areas would depend on level/grade within the organisation, and on area of expertise. Therefore interviews were structured in accordance with the likely level of knowledge of the participant. For example, a Senior Production Manager was expected to have a greater knowledge of management systems and appraisal techniques than a production operative. Certain sections were omitted from some interviews on this basis.

5.2.3 Company interviews

Interviewers
Interviews were conducted by Occupational Psychologists and/or the Occupational Physician from the project team. Their knowledge of the theoretical basis of the research was regarded as fundamental to the interview process, as was their ability to modify the interview appropriately depending on the role of the person being interviewed. The combination of psychologists/occupational physician varied across the organisations. The interviewers were selected on the basis of knowledge of the nature of the organisation, and availability at the time of the interviews. For example, in the Health Trust, the Occupational Physician played a fundamental role in tailoring the interview and conducting interviews with senior staff working at a strategic level drawing on experience gained when working in the Health Service. Similarly the Occupational Psychologists conducted interviews in stage II (Company A) where knowledge of psychological tests was required. The Occupational Physician was not involved in work conducted in Organisation A, other than peer review, due to ongoing involvement with the organisation in other work, and the need to ensure impartiality of the interview process.

Interview schedule
The schedule of interviews varied across the three organisations, although in each company, utilised the model outlined in Chapter 3. Originally three interviews were conducted daily by each interviewer, with each interview lasting up to two hours. This was reviewed in subsequent organisations as it was thought more appropriate to conduct one or two interviews, due to the amount of data obtained in each, and allow time for transcription between interviews. Initially interviews were allocated on the basis of seniority of the participant. Subsequently there was a random allocation of participants between the interviewers, to allow the interviewer to build up a knowledge of several levels within the organisation as the interviews progressed. This allowed the interviewer to pursue in more depth, relevant issues arising during the course of the interviews.

Where feasible, meetings of interviewers were held on a regular basis to exchange information. This was particularly helpful with interviews of specific roles e.g. Personnel Manager, Health and Safety, Occupational Health, Managing Director/Chief Executive, where the information obtained was not likely to be duplicated in other interviews.

Data recording
Due to the need to ensure that participants comments were recorded accurately, permission was sought from each company to tape the interviews. We had initially considered using two IOM staff at each interview, with one making written records of the interview. However this was not considered to be a cost-effective use of resources. Permission was given by all participating companies, and verbal consent was confirmed with each individual at the time of the interview. All individuals were assured that information stored on the audio tapes would be erased following transcription by the IOM interviewers. It was also emphasised that all information collected, whether taped or in written form, was confidential and that the identity of any individual would not be disclosed within the final report, or to company management.

5.2.4 Analysis

On completion of the interviews, information from audio tapes was transcribed by each interviewer, and information collated and summarised by the interviewers, in terms of the components of the model outlined in Chapter 3. The summary results were presented to an IOM internal team meeting. The team included representatives from Senior Management (e.g. Board members, Finance, Personnel), an Ergonomist, Occupational Psychologists and an Occupational Physician. The IOM operates a multidisciplinary framework, and the team members were selected to ensure a representative response to the topics covered within the Stage I interviews.

The team had been given initial briefings on the background and purpose of the OSHA, and prior to the presentation of results for each company, the team were given background information about the company, and summary results from each section of the interview presented in tabular form. Results were presented in terms of the current strengths and weaknesses of the organisation for each of the topics covered in the interview, and the interviewers' assessment of opportunities for improvement. This was followed by an open discussion in which the main findings of the investigation were debated in more depth, and suggestions made for possible Stage II investigations. This multidisciplinary approach provided a comprehensive overview of the results, and facilitated the production of the written report.

5.3 Results

Following the internal team meeting the interviewers produced a draft report which was subject to internal peer review, before being sent in draft format to the company. A specimen report can be found in Appendix 2. The results presented in the specimen report are for a hypothetical company, but cover many of the issues identified within the organisations participating in this project.

Copies of the final draft report were sent to Company contacts for comment. At this stage results were often discussed with Senior personnel staff, and their comments taken into account in producing the final report. This approach was taken in order to ensure that companies had prior notice of any potentially sensitive issues, and to ensure that there were no significant omissions in the report from the company's perspective.

Due to the large quantity of information within the reports, the IOM team decided to send final reports to all Company representatives who would be attending the feedback session. This decision was based on the experience of presenting results to Company A, where representatives had not had the opportunity to see the results prior to the meeting, and had difficulty in understanding the emphasis of the recommendations for Stage II. Where possible, copies of reports were sent out two weeks in advance of the meeting, to allow individuals time to assimilate the findings, and consider the options for Stage II investigations. This proved helpful in both Companies B and C, where the time allocated for feedback was relatively short. This approach allowed the main findings to be presented in summary form, with more time being available for open discussion and consideration of Stage II. At the end of each feedback session, a clear consensus had been reached on the specific focus of the Stage II investigation.

In all three companies Stage I results were presented to Directors or other Senior Managers, and therefore their commitment to the continued progress of the investigation was assured. In analysing responses from the companies taking part in this feasibility study, it was apparent that there were common work-related stressors, which were highlighted as major concerns within the three companies. The common stressors included: workload and pressure to deliver services; uncertainty about the future in relation to job security; lack of resources either financial or staffing; and poor communication or lack of consultation on relevant issues.

5.4 Discussion

Feedback on the Stage I approach was obtained from Senior Company representatives at the time of the feedback session. Comments were favourable, particularly in relation to the minimal disruption to work routine, and limited down-time for staff involved. The agreement to proceed to a Stage II investigation in each company also implies a certain level of satisfaction with the work of Stage I. However, in order to obtain more comprehensive feedback, evaluation forms were sent out to all individuals taking part in Stage I. A copy of the evaluation form can be found in Appendix 3.

The results of this individual feedback on Stage I for all three companies, is given in Tables 5.1a,b,c. The results show that in general most participants felt that they had received sufficient information about the purpose of the interview (89%), and felt that the interview technique was satisfactory. It was felt that the length of time taken for interviews was appropriate. However, despite this several respondents were surprised by the scope of the interview, and occasionally felt uneasy answering questions 'cold'. Forty two percent expressed a desire for more information about the content of the interview. It is proposed that in future an 'agenda' be included in preliminary information sent to participants, listing the main topics, but it is felt that more detailed information would be counter-productive, allowing participants to plan their response. All those participating within each company were willing to provide information on all sections of the interview, and therefore it is not considered that the information sought was too sensitive.

It was also generally agreed that the OSHA dealt with relevant causes of stress within the organisation (average 94%). However, only 81% respondents felt that the OSHA Stage I dealt with their personal stress issues. The Stage I OHSA was primarily designed to be a top-down cross-sectional approach, and therefore it is not surprising that respondents felt that it did not address specific issues at an individual level. However 81% of respondents did consider it to be personally relevant, and it was obviously perceived as extremely useful in addressing issues across the organisation. Stage II is designed to focus in more detail on the needs of specific groups.

The OSHA was also not primarily designed to address general health and safety issues, and it was found during the course of the interviews, that the impact of these issues on general well-being varied across the organisations. Hence the level of information sought about specific health and safety issues also varied between organisations. These two factors together may account for the varied response to question 4 on the evaluation form.

The interviews were structured in such a way as to ensure that the information sought from individuals on organisational factors was relevant to their level within the organisation, and to their specific role. The ability to ensure that this was done effectively was limited by the extent of knowledge of each function within the organisation prior to the interviews. Thirty two percent of respondents reported some difficulty answering questions which were outside their experience/knowledge. It would be beneficial to spend more time during the planning phase, either with a process group or the company contact, to ensure that the broad content of each interview is relevant for the grade/level to be interviewed.

There was no broad agreement on how information would be presented to individuals within the organisation, and this was left to the discretion of the organisation. This was clearly viewed as an important issue, with 97% of respondents wishing wider access. This is a factor which should be discussed with Senior Management at an early stage, so that a clear response can be given by interviewers, as this helps to ensure co-operation. The assurance of confidentiality of response was equally important, and perceived to be most important by Senior staff. There was also an expressed desire that work that had been done should be continued. The limited timescale of this study restricted the amount of on-going evaluation which could be performed, but this is seen as an important longer term objective.

Table 5.1: Responses from the OSHA Evaluation Forms

Table 5.1a

Question	Number of 'YES' responses				Percentage of 'YES' responses			
	Co. A n=14	Co. B n=21	Co. C n=29	Total n=64	Co. A n=14	Co. B n=21	Co. C n=29	Total n=64
1. Were you given enough information about the purpose of the interview?	13	18	26	57	93%	86%	90%	89%
2. Did you feel that the interview addressed your needs?	10	18	24	52	71%	86%	83%	81%
3. Did the interview address relevant causes of stress within your organisation?	12	20	28	60	86%	95%	97%	94%
4. Did the interview address health and safety issues within your organisation?	11	17	15	43	79%	81%	52%	67%
5. Were the questions presented clearly?	14	20	28	62	100%	95%	97%	97%

Table5.1b

Question/Response		Too long	Just right	Too short
6. What did you think about the length of the interview?	Company A: No. of respondents	0	12	2
	Perc %	0	86	14
	Company B: No of respondents	2	17	2
	Perc %	9	81	9
	Company C: No of respondents	3	23	3
	Perc %	11	79	11

Table 5.1c

Question	Number of 'YES' responses and indication of content of comments		
	Company A n=14	**Company B n=21**	**Company C n=29**
7. Do you have any comments about interviewer technique?	n=9 Good - made to feel at ease	n=17 Relaxed and well conducted	n=18 Relaxed and non-threatening
8. Did you find any of the subject areas difficult to answer?	n=5 Some of the issues discussed were outwith my experience/position/ knowledge	n=6 Lack of knowledge concerning certain areas relating to company	n=10 Some difficulty with questions relating to Personnel and Managerial functions
9. Can you suggest ways in which the interview could be improved?	n=6 Submission of interview agenda prior to interview. A 'pre-interview' slot	n=8 Provision of more detail prior to time of interview	n=13 More information prior to interview
10. How would you like to see the information gained from interviews and recommendations to be presented to the organisation?	n=14 Honest interpretation. Copies of report to all Managers, after which a presentation.	n=19 All interviewees to have access to report. Wide distribution	n=29 Presentation to all participants as well as Managers
11. Any other comments?	n=10 Diverse comments	n=3 Nothing pertinent	n=10 Hope that this work will be followed up

6. STAGE II INVESTIGATIONS

6.1 Aims

The aim of Stage II was a detailed investigation of either: a group of individuals identified from Stage I as being under particular pressure; or an area of organisational behaviour which, based on data from Stage I, could have potential impacts on the well -being of several groups of employees. Detailed information on specific stressors was obtained by individual interviews, questionnaires, or a combination of both these methods. Based on the results obtained, recommendations were made for risk reduction which were specific to the group taking part in the Stage II investigation.

The methods selected were appropriate for the three companies taking part in the study, but the Stage II approach is flexible, and a range of possible methods can be used dependent on the specific stressors identified within an organisation. Some of the available survey instruments are discussed below.

6.2 Methods

The specific approach taken in each company was dependent on discussion with Senior staff at the Stage I feedback meeting. However, in each case the investigation chosen was one where the IOM team believed that appropriate intervention could produce a rapid reduction in work-related stressors within the employee groups identified. In addition, the investigation chosen utilised the specific skills of the IOM team, rather than an initiative which could be readily achieved by the organisation in-house. This enabled the companies to act on other Stage I recommendations where they had the necessary resources, or felt competent to do so.

As a result of Stage I findings, the focus for Stage II in both companies A and C was a specific group of employees within the company which had been highlighted as being under particular pressure due to issues of workload, staffing levels or job design. The method used in both of these companies was a combination of semi-structured interview with representatives of the specific employee group, and self-administered questionnaires on general well -being, anxiety and depression and the impact of the work-environment. The questionnaires were completed by the group interviewed and a comparison group

Company B had undergone considerable organisational change and was continuing to evolve. Stage I results suggested that communication of change within the company could be improved, and that certain groups of employees were under particular pressure due to the pace of change. It was agreed that an attitudinal survey of employees in this organisation would be of value in facilitating future change. The method used involved two self-administered questionnaires assessing team working, and potential sources of resistance to change.

Outlines of the Stage II proposals presented to the companies can be found in Appendix 4.

6.2.1 Development and selection of survey instruments

Three well validated self administered questionnaires were used for employees from Companies A and C:

a. The General Health Questionnaire (GHQ-12)
b. The Anxiety Stress Questionnaire (SAQ)
c. The Work Environment Scale (WES)

The scales were administered to investigate both psychological and general health, and aspects relating to the existing work environment.

Semi-structured interviews for Companies A and C were developed on the basis of information obtained by IOM staff at a process meeting held with representatives of the employee group forming the focus of the Stage II investigation. Employees attending the focus meeting were asked to discuss in more detail those issues which had been highlighted in Stage I as potential sources of stress. In addition they were asked to outline their specific roles and responsibilities within the organisation.

For Company B a self-administered questionnaire on resistance to change was developed by IOM staff based on knowledge of change which had taken place within Company B, and on a literature review of those organisational and individual factors which influence change. A second questionnaire, the Team Climate Inventory was also used for Company B. This is a standardised questionnaire which addresses team work within organisations.

The Stage II interview process followed the same pattern as outlined in Chapter 5 for the Stage I investigations. Interviews were again conducted by either Occupational Psychologists or an Occupational Physician, dependent on the focus of the Stage II investigation, to best utilise the range of available expertise.

6.2.2 Selection of participants

For Company A participants were selected on the basis of discussions with the Company contact and relevant Senior Staff. Once agreement had been reached with Senior management, it was felt that the Company contact could most easily obtain agreement on the staff to be included, and arrange the scheduling of the interviews. As only ten members of staff were included in interviews, it was possible for IOM staff to hand out questionnaires at the time of the interview.

Although the methodology for Company C was similar, due to the larger size and complexity of the organisation, a meeting was held between IOM staff, Personnel, and Senior Staff from the employee group to be investigated. Senior Staff suggested names of individuals to be included in interviews, and a comparison group from similar disciplines who would be sent questionnaires. Forty individuals were included in this exercise. The comparison group included staff of similar grade to those included in interviews, but working at different locations. The inclusion of a comparison group was agreed between the IOM team and Steering Group members, to ensure that issues of job security at the location surveyed during Stage I did not bias levels of work -related stress reported during Stage II. Those employees included in the comparison group, had similar responsibilities but less reason to be concerned about job security. The arrangements for interviews were coordinated by Personnel. Questionnaires were sent direct to staff by the IOM, and each included pre-paid envelopes to ensure confidentiality.

In Company C it was decided to restrict the stage II interviews to the same geographical areas of the organisation covered in Stage I, in order to ensure comparability of response. The selection approach used was therefore essential, due to limited numbers of staff in the employee grade selected for interviewing at this particular location.

As the Stage II investigation for Company B involved a cross-sectional questionnaire survey, the assistance of the Human Resources department was obtained. It had been decided to send questionnaires to similar numbers of staff in seven different departments. The Human Resources department assisted in identifying team leaders within each of the departments, and initiated the recruitment of volunteers. Each participating department was sent information outlining the nature of the survey, and guaranteeing confidentiality of response. It was planned to recruit 70 individuals from Company B but, due to the poor response,

questionnaires were sent out to only 44 individuals. The possible reasons for the low response and the implications are outlined in the Stage II summary for Company B in Appendix 4.

Questionnaires were sent out direct from the IOM to participants in Company B, and included a pre-paid envelope to ensure confidentiality of response. This selection approach was used due to time constraints within the project, and the cross-sectional nature of the investigation.

6.2.3 Analysis

Normative data were available for comparison of scores from the GHQ-12, SAQ, WES, and Team Climate Inventory. Questionnaires were scored with reference to this baseline data, however an internal comparison was also available within the companies, based on the comparison groups within each organisation who also completed the questionnaires.

As the questionnaire on resistance to change was developed by the IOM team, there were no normative data available for comparison. However, it was possible to compare results across groups from different departments to detect specific trends, and it was also possible to compare 'team' outcomes against those predicted by the results of the Team Climate Inventory. The Team Climate Inventory includes a software package, which analyses results against normative data.

All results were analysed by IOM staff who conducted the interviews, with reference to data produced by the designers of each scale and with the assistance of an IOM data scientist.

As in Stage I, the data collected from the semi-structured interviews were transcribed by the interviewers, and information collated and summarised. The findings from the Stage II interviews were compared against the scores obtained from the questionnaires for the group interviewed. The questionnaires used are all well validated, and therefore were used to provide confirmation of the findings of the semi-structured interviews. Scores from the group interviewed were also compared against those of the comparison group. The comparison group worked in the same organisation performing similar tasks, but on the basis of the Stage I investigation were thought to be subject to lower levels of occupational stress than the survey group. The questionnaire data therefore provided information about data within similar work groups in the organisation, and allowed this hypothesis to be tested. The findings of the Stage II survey were then compiled into a written report for each company.

6.3 Results

Written reports were produced for all three companies based on the findings of the Stage II investigations. The reports outlined the objectives of the Stage II investigation and the methods used. Summary results were presented for interview data for Companies A and C (as Stage II in Company B did not involve interviews), and for questionnaire results for all three companies. A discussion of the results followed, with recommendations for specific initiatives within the groups surveyed.

The draft reports were reviewed by members of the IOM internal team who had been involved in Stage I. A final draft was then sent to the Company contact, who arranged discussion of the results with relevant Senior Management. Due to the time constraints within the project it was not possible to arrange formal presentation of Stage II findings, as had been done for the first phase of the project. However, evaluation forms were sent to all Company contacts, as described in the next chapter, and information sought relevant to Stages I and II.

Summary findings for Stage II investigations for the companies can be found in Appendix 4.

6.4 Discussion

The Stage II approach provides a flexible method of investigating identified stressors within specific employee groups. Although the methods employed in Companies A and C were similar, the content of the semi-structured interviews differed significantly between the two organisations, as did the recommendations arising out of the investigations.

The Stage II process can thus be applied to groups, or as a means of addressing an issue which has potential significance for all employees. This is illustrated by the method used for Company B, where effective communication of change was an issue which had implications for all employees.

In some organisations where a specific stressor or 'at risk' group has already been clearly identified by the organisation, it might be appropriate to use a Stage II approach without the need for an initial Stage I exercise.

The Stage II findings often validated the main findings from Stage I. In focusing on a specific group of employees, it was found that the work-related pressures most frequently reported within this group were the same as those reported by the wider organisation. For Company B the focus of Stage II was supported by the findings of the groups surveyed.

As previously stated due to time and financial constraints it was only possible to focus on one of the recommendations from Stage I. However, in presenting the findings at the feedback session it often emerged that the recommendations had been verified by the company's own investigations on specific issues. As a result of the confirmatory nature of the Stage I results, two of the companies expressed an intent to implement initiatives to address these issues.

As discussed in Chapter 3, the methodology used in Stage II is extremely flexible, and due to the multidisciplinary nature of the IOM, it has been possible to recommend and implement a broad based Stage II, which can again be tailored to the specific needs of the organisation. Details of feedback from the companies on the Stage II methods used in this project can be found in Chapter 7.

7. EVALUATION AND MONITORING OF ACTIONS TAKEN

Indicative feedback was sought from Company representatives about the perceived benefits and limitations of the OSHA approach to allow a re-appraisal of the process. In addition information was requested on the extent to which recommendations made in Stage I had been implemented, and on their potential impact. Information was also requested on the relevance of the Stage II approach, although it was acknowledged that the companies had limited time to act on these recommendations.

It was decided to limit this exercise to those individuals who had played a significant role in co-ordinating Stage I and/or Stage II investigations, and had therefore been present at steering group meetings and had been aware of feedback from senior management and the degree to which recommendations had been implemented.

All company contacts were sent an evaluation form, and provided with pre-paid envelopes so that forms could be returned directly to the IOM to maintain confidentiality. A copy of the evaluation form can be found in Appendix 5.

Information was obtained on the time required by the co-ordinator for both Stages I and II, level of management commitment, and difficulties encountered in recruitment or arranging interviews. Feedback was sought on the quality of the information provided by the IOM team, both prior to the investigations and at reporting. The evaluation also included an estimate of perceived costs to the organisation, and benefits and limitations of the process compared with other stress management tools.

For all organisations involved, it was recognised that there was only a brief interval between reporting Stage II findings and receipt of the 'Company contact' evaluation form, and that the level of implementation of Stage II recommendations cannot be reliably assessed at this time. It would be beneficial to evaluate the on-going impact of the recommendations at intervals of six and twelve months from Stage II reporting.

Results of the evaluation of the Stage I and II approach by the company contacts are shown in Table 7.1. It can be seen that, in general, organisations were supportive of the time required by the company contact for coordinating recruitment and scheduling of appointments. None of the contacts felt that the time they required to organise the survey in their company was excessive.

All organisations were satisfied with the method and format of reporting, and felt that the approach recommended in Stage II had been relevant to the problems identified in Stage I. The techniques used were rated as causing minimal disruption, good at identifying organisational causes of stress, and compared well with other available stress management tools known to the companies. It was also considered by the respondents that the costs incurred in terms of down-time for staff involved, were reasonable and were outweighed by the benefits gained by the organisation through this exercise

Table 7.1 : Evaluation of OSHA - Company Level

	COMPANY		
	A	**B**	**C**
Sufficient background/support from IOM before and throughout survey	Yes	Yes	Yes
Sufficient support from your own organisation	Yes	Yes	Yes
Did role of coordinator increase workload	No	No	No
Time spent introducing study to organisation	2 days	6 days	4 days
Time spent organising Stage I	3 days	14 hours	2 days
Time spent organising Stage II	2 days	8 days (all recommendations from Stage I acted on)	4 hours
Recruitment methods used for interviews etc.	Approach very successful	Personal contact is essential	Seemed to work well
Was focus of Stage II relevant	Yes	Yes	Yes
Presentation of results satisfactory	Yes	Yes	Yes
How does IOM OSHA compare with your experience of other stress management techniques? (a) disruption to work routine (b) costs to organisation © identification of potential stressors (d) a risk reduction process	 Low Low Good Good	 Low Low Good Good	 Low Low Good Good
Benefits to organisation	Recommendations acorporated into other quality initiatives Issues of workload and reporting being considered	Action taken on many of issues raised including sickness absence and procedure revised	Confirms findings of in-house studies. Provides support for interventions
Other comments	Report very well received Suggest IOM to `introduce' study to employees	How well IOM team got to grips with a complex organisation	Too early to evaluate impact of recommendations

8. GENERAL DISCUSSION

In this chapter consideration is given to how well the aims of the project have been addressed.

8.1 Recruitment of Companies

It is not possible to examine the advantages and disadvantages of various recruitment methods within this study. Each of the companies participating in this project had already expressed concerns about occupational stress, and had established links either with the IOM or HEBS, and therefore no 'cold' recruitment was required. The relatively short timescale of the project also necessitated swift recruitment, and the existing contacts proved invaluable in achieving this objective.

In general, it is probable that organisations who will be willing to participate in this type of exercise, will have already identified stress, or related factors such as sickness absence, as areas of concern within the organisation. This was certainly true for the companies agreeing to take part in this project. A more important issue is likely to be that of effective marketing of the particular approach embodied in the OSHA, rather than the more traditional idea of treating the individual. Providing stress counselling or training in stress reduction through relaxation or other procedures are aspects which have been extensively marketed and are therefore well-established in the minds of many as *the* way of dealing with the issue of stress at work. They also have the apparent advantage of maintaining the illusion that succumbing to stress is somehow a personal failing, divorcing the company from any blame. However, the approach embodied by the OSHA does have the advantage over many conventional 'survey' approaches in that it is less overtly connected to the concept of 'stress'. This can seem a useful feature to those senior managers who do not necessarily subscribe to this concept or who would prefer a low profile to be adopted than a 'stress questionnaire' would create. Indeed, it is possible to conduct the exercise as a 'health' initiative, by emphasising aspects of organisational well -being, with little or no overt emphasis on 'stress'.

The HSE, through their publication 'Stress at Work', supports the methodology used, advocating the treatment of psychological hazards in the work place in the same manner as physical hazards. It is possible therefore that the HSE would assist in the promotion of this approach across industry. In addition, marketing the approach should focus on the benefits of the approach as highlighted by the evaluations performed in the participating companies, such as minimal disruption, flexibility, and effective assessment of occupational stressors.

8.2 Cross-functional, top-down approach

It was possible to ensure a cross-functional and top -down approach for each of the companies taking part. However, as outlined in chapter 5, there was a potential for selection bias by contacts or senior staff within the organisation of those to be included in the interviews. Again time was an important factor in the recruitment process and it was also essential to ensure that all relevant sectors of the organisation were represented, and all levels within the organisation. In order to achieve this quickly and effectively, an inside knowledge of the organisation was required. The use of a systematic approach, based upon an organisational chart for the company involved, helped to minimise the risk of bias. In particular, in many instances the selection was dictated by job title with no opportunity for manipulation. The only choice came where there were a number of individuals in a particular category of, for example, middle management. Even here, the opportunity for bias was limited by the need to ensure that all sectors of the company were represented and this often dictated the selection process.

On balance, the use of Company contacts facilitated recruitment of personnel, ensured the smooth running

of both Stage I and II investigations, and maintained feedback on progress within the organisation. It can be said that the commitment of the Company contact was a significant factor in determining the rate of progress of the investigations, and this was evident in the differences observed within the three participating companies. In addition, where there was any scope for choice in selecting individuals for interview, the company contact could advise on who would be more likely to be communicative and forthcoming, helping to ensure the success of the interview process.

As an indication of limited bias in selection for interview, the diversity of comments obtained during the interviews can be regarded as reducing the possibility of recruitment methodology having biased the outcome of the investigations. The use of skilled interviewers also assisted in this process as they would have been likely to have been alert to bias within the interview process. Finally, alternative selection procedures would have had implications for time and staff resources, and could not have been guaranteed to provide comprehensive coverage of the organisation.

Involving Senior management within the interview process ensures commitment to the whole exercise from the top, and comprehensive coverage of all aspects of organisational policy and practice. As the study progressed the added benefits of holding process meetings to obtain specific information about the organisation became increasingly apparent. It is now recognised that it is essential to hold such process meetings prior to the commencement of Stage I. In addition, more employee representatives could usefully be involved at this stage to provide an input to interview preparation; to advise on how results should be presented to employee groups; and to provide a channel for feedback at the end of each phase of the study.

8.3 Risk assessment/management approach to organisational stress

As outlined in the introductory chapter, the OSHA was developed as a risk assessment/ hazard control approach to organisational stress and follows the steps within the COSHH cycle, and those defined by Cox (1993). The steps taken in terms of hazard identification; risk assessment; review of existing control measures; recommendations for improved control; and evaluation of controls can be delineated within the development of the OSHA (Chapter 3).

The feedback from company contacts and other individuals within each organisation (Chapters 5 and 7) suggests that the approach was effective in identifying organisational stressors; in selecting areas/groups at high risk; and in producing relevant recommendations for risk reduction. Although companies showed a willingness to implement recommendations for risk reduction, the restricted project timescale limited the opportunity to evaluate the impact of these recommendations and the extent to which they have been implemented within each organisation. This is clearly an essential component of the OSHA approach which should be included in any further study of the approach.

As described above, the Stage I approach was designed to be cross-sectional and primarily designed to identify organisational stressors. There is therefore limited coverage of the organisation in terms of the number of employees involved or interviewed. In addition, only limited information is obtained during this stage on the impact of pressure on specific individuals. However, this can be viewed positively as many such impact measures are necessarily subjective and, as stated earlier, can often be regarded with some scepticism by those within an organisation who are doubtful of the 'stress problem'.

Stage II is designed to focus on 'high risk' areas or employee groups within the organisation, and this approach can have a narrow or wide focus dependent on available resources. During this work, it is possible to assess individual risk on the basis of questionnaires which address identified stressors within 'high risk' groups. This has the advantage over conventional approaches, which usually commence with

individual questionnaires to all employees within an organisation, in that the administration of such tools is more focussed. A further advantage over conventional surveys is that Stage I may well have identified the nature of the problems affecting the target group thereby allowing a questionnaire specifically designed to address those problems to be selected and used, again providing a more focused effort. Other Stage II approaches might include needs assessment, or training on stress awareness, which can be applied at the level of the individual.

8.4 Evaluation and documentation of the process

The approaches used in Stages I and II have been evaluated by company contacts and participants from all three companies. The methods used in evaluation and results obtained can be found in Chapters 5 and 7, and Appendices 3 and 5 of this document.

The response from participating companies has been positive, and the approach clearly has benefits in terms of minimal down-time and disruption, and limited costs of the process. The OSHA has also proved to be flexible across industry sectors; across different circumstances of change; and within individual companies, where interviews or questionnaires could be modified to address specific factors within an organisation. As a result, the OSHA could be used with confidence in any company within either the private or the public sectors.

The use of a three-stage approach also had the benefit in that the information collected during one phase was found to support that collected earlier. This was despite different tools or techniques being used in each phase; different groups within the organisation being assessed; and different individuals being involved in the process, thus providing a degree of validation of the methodology. The three tiers also add to the flexibility of the approach, in that organisations may seek assistance at the Stage I level, but feel able to implement recommendations in-house, without requiring external assistance. Certainly there was evidence from participants in the study that they were able to address at least some of the issues raised themselves. Alternatively, the organisation may feel confident of having identified the major stressors, but require assistance with investigating these areas in a Stage II approach.

Careful documentation of all aspects of the work has taken place throughout the project, much of which is summarised within this document. In addition each company has received comprehensive and confidential reports for both Stage I and II. The main findings from these assessments are also detailed in the report, whilst maintaining client confidentiality. An overview of the main issues highlighted in Stage I can be found in the Specimen report (Appendix 2), and summaries of Stage II findings are presented in Appendix 4.

8.5 Pilot methods for evaluating impact and outcomes of the approach

The time constraints within this project have limited the opportunity for companies to implement recommendations and therefore our ability to evaluate the true impact and outcomes of the recommendations made. As discussed in Chapter 7, the companies participating were taking steps to implement specific recommendations, for example changes in work design, or review of policies and procedures. Stage III of the OSHA is intended to provide ongoing evaluation of the impact and outcomes of the recommendations made in Stage I and II as this is an essential part of the process. It should also be remembered that companies are constantly changing and an integral part of any stage III should be a system which would identify the emergence of new stressors at an early stage. Over a period of time this ongoing evaluation should enable the organisation to perform a cost-benefit analysis of the approach.

8.6 Development and implementation of the approach

At present, effective application of the OSHA is dependent upon accurate data collection and analysis by interviewers trained in relevant disciplines such as psychology. Although a standard structured interview shell was produced, the actual interviews were modified for each organisation before the onset of Stage I and, as stated earlier, were also altered during the interview schedule. This inherent flexibility of the approach, allowing emerging issues to be fully explored, is a vital element in the success of the approach.

Although not a specified aim of the project, one issue of interest to the sponsors was the potential for further development of the approach to render it suitable for use by smaller businesses, probably on an in-house basis. At present, maintaining the flexibility of the full Stage I OSHA depends upon the use of extensively trained interviewers who have the professional expertise not only to modify the structured interview shell as and when required but also to identify and interpret the stress factors emerging through the interview process. It would be difficult for an organisation to devise and apply this system in-house without such expertise. In addition, one aspect of the interview process not formally explored is the extent to which the independent nature of the IOM interview team encouraged openness, helping to guarantee an unrestrained response from participants. Certainly, our experience in many other fields of occupational health suggests that this is an important factor in gaining the confidence of participants, particularly from amongst the general workforce.

However, there were some areas of commonality in terms of some of the general issues which emerged as sources of stress within each company. It is possible that, based on experience gained during this project, a tool could be developed, possibly in the form of a pre-OSHA checklist, which could be applied by organisations with minimal training in this field.

The feasibility of developing a risk assessment and control approach for workplace stress is summarised in the next chapter, along with recommendations for the further development of this work.

9. CONCLUSIONS AND RECOMMENDATIONS

The pilot project demonstrates the flexibility of the OSHA in identifying a range of work-related stressors across widely differing organisations. The companies which were recruited represent both public and private sector, and allowed comparison of the OSHA within both the industrial and service sectors. The companies chosen varied in size and complexity, and within each there was a diversity of function and age ranges represented. The organisations had variously experienced upsizing, downsizing and restructuring, with consequent differences in uncertainty over future employment. The relative importance of specific health and safety issues also varied across the organisations.

Recruitment methods were not studied as part of the project. However, it was concluded that marketing the particular approach was likely to be more important, as the initial 'customers' were likely to be companies who had already recognised the existence of a stress problem.

It was also concluded that the involvement of the most senior levels of management was vital in ensuring the successful application of the OSHA, both in getting the issue taken seriously (and being seen to be taken seriously) and in facilitating the subsequent implementation of any recommendations for change. As part of this process, it was essential for the primary company contact to be at a relatively senior level within management to ensure the speedy and efficient organisation of the OSHA process within the company. However, it was seen as equally important that staff from all levels should be involved, not only in the OSHA itself but in the preliminary organisation and planning.

An integral part of the flexibility of the OSHA approach is seen as the facility to 'mix and match' in relation to the needs of the company. Many of the Stage I recommendations made were well within the capability of most companies to act upon without further external intervention or involvement, with obvious benefits in terms of cost as well as less tangible benefits such as 'ownership' of the changes enhancing the prospects for success. Alternatively, where a company had already identified a particular element of their workforce as being at risk it would be possible to apply Stage II procedures to that group possibly without the need for Stage I.

The OSHA was designed as a three tier approach, and formal evaluation of each stage of the process together with ongoing organisational audits are essential to the risk assessment approach to workplace stress in which it is necessary to confirm that measures taken to reduce risk have been successful. The OSHA was also designed to be used by those with specific knowledge of organisational behaviour. However data collection has identified areas of commonality between organisations in relation to specific workplace stressors. It is recommended that, based on this information, a simple audit or pre-OSHA checklist could be developed which could be applied in any organisation by those with a relatively limited knowledge of occupational stress.

Data collection during the present project has also identified specific systems or practices which have been implemented by the organisations which have proved beneficial in reducing levels of organisational stress and related factors. By performing the OSHA in a larger number of organisations, it would be possible to establish a database of good practice, which could assist other companies in implementing risk reduction methods, and could be incorporated into training programmes.

During the course of the project it became apparent that whilst organisations collected data on sickness absence in some form, there was often a lack of consistency in procedures used to record data and in the information retained. In addition, the storage systems used did not allow the identification of trends of absence between groups, or over specified time periods. As a result, a potentially invaluable source of information about the health of the company workforce was neglected. Given the considerable costs to

organisations of sickness absence, there is a clear need for improved software packages to record and retrieve sickness absence data, which are flexible enough to be used across a range of industries.

There is still only limited awareness within organisations of the factors associated with organisational stress, or of suitable methods of risk reduction. The provision of information, instruction and training is an important aspect of employers' responsibilities in the process of risk assessment and hazard control as laid down in the Management of Health and Safety at Work Regulations 1992. Within the OSHA, training programmes may be a specific recommendation for Stage II. However, training has a much wider application than within the OSHA framework. As stated earlier, training can be given on the identification of stressors, possibly through the checklist method described above. Stress awareness training for management and employees can also play a useful role in encouraging openness and helping to diffuse the belief in stress primarily as a failing of the individual. Additionally, employers can be given assistance in implementing safe systems of work based on best practice data.

Summary

The main aim of this pilot project was to assess the feasibility, in terms of cost and acceptability, of developing the risk assessment / hazard control approach to workplace stress in Scottish workplaces, with emphasis on the private sector. This study has clearly demonstrated the feasibility of Stages I and II of the OSHA in identifying a range of work related stressors across different organisations. Companies showed a willingness to implement recommendations made on risk reduction measures. It is concluded that the OSHA may be used successfully in companies within either the private or public sectors.

A further aim of the study was to provide a basis for developing a larger scale controlled trial of the approach. This project has identified a number of aspects which could be incorporated in such a study, including:

- conducting Stage III in the companies which participated in this pilot study to assess to what extent recommendations from Stages I and II have been implemented and their impact, and identifying new stressors (if any);

- extending coverage to more companies to increase the range of systems and practices identified as being beneficial in reducing levels of organisational stress and related factors, thereby developing a database of good practice which could assist other organisations nationally;

- assessing the feasibility of applying Stage II, either alone or followed by Stage I and/or Stage III, in situations where companies have already identified high risk groups;

- evaluating the effectiveness of different methods of recruitment;

- developing tools / techniques which could be applied by organisations themselves (including small companies), particularly those with limited knowledge of occupational stress. These could include a checklist to aid identification of workplace stressors, and improved software packages for recording and monitoring sickness absence data, flexible enough to be used across a range of industries. These, together with `good practice' risk reduction measures, could be used to improve guidance and training for management, supervisors and other employees.

It is felt that all of these recommendations are of equal value, and that all can be ultimately achieved by a larger scale controlled trial of the approach, and by revisiting participating companies to evaluate the effectiveness of risk reduction measures. A larger trial would also allow an evaluation of the effectiveness of different methods of recruitment, and the establishment of a 'good practice' database, which could be used to provide advice and support for smaller companies.

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APPENDIX 1

Traceability of OSHA

Appendix 1: Traceability of OSHA

ORGANISATIONAL (structures, processes and policies)		
Study	**Outline of work**	**Outcome - List of recognised work-related stressors**
Kasl (1992)	Organisational size and structure	A flat structure with relatively few levels of organisation; Cumbersome and arbitrary procedures; Organizational red tape; Discriminatory policies.
Landy (1992)	Management behaviour and supervisory style	Poor interpersonal relationships between supervisor and subordinates. Lack of involvement in decision making. Poor information on work requirements. Limited autonomy of work groups.
Cox (1993)	*List of work-related stressors:* Review article on early and contemporary studies on the nature of stress at work, it's effects on health and the way in which such knowledge is being applied in attempts to manage the problem	Poor task environment and lack of definition of objectives, poor problem solving environment, poor development environment, poor communication and non-supportive culture
Marmot et al (1995)	*Sickness Absence Policy:* Data from the Whitehall II study which surveyed non-industrial civil servants in London	Authors found a striking inverse relationship between rate of sickness absence and grade of employment. An inverse relationship was also seen between job satisfaction and short term (1 or 2 day duration) absence rates. The authors propose using sickness absence as a measure of physical, psychological and social functioning in working populations.
Confederation of British Industry, CBI (1995)	*Sickness Absence Policy*: Survey on 'Managing Absence'	Confirmed that respondents believed that a formal policy for managing absence had a significant impact on absence control. The mean number of days absence for organisations who kept no records was 30% higher than those who kept computerised records.

Confederation of British Industry, CBI (1993)	*Health Policy:* Survey on staff morale and turnover	Acknowledged that the loss of employees due to ill health was both costly in financial terms and removed valuable individuals from the workforce. The survey emphasised that taking positive steps to improve employees' health can go a long way to improving morale and reducing staff turnover.
Malcolm et al (1993)	*Occupational Health Service:* Evidence for cost-effectiveness of an Occupational Health Service	A joint venture between Occupational Health and Personnel at North Tyneside Borough Council led to savings of £760,000 in one year, by revising the sickness absence referral system.
Allison et al (1989)	*Mental Health initiative:* Evaluation of stress management initiative at the Post Office	Showed that stress management initiatives which were coordinated through Occupational Health and Personnel systems led to a 32% reduction in related absences and medical retirement. Introduction of a programme of critical incident training, crisis management, management de-briefing and trauma counselling which led to a 50% reduction in trauma related sickness absence.
Cooper & Sadri (1991)	*Mental Health initiative:* Evaluated the effect of the Post Office counselling service	Found a reduction in sickness absence and anxiety levels post-counselling and an improvement in self-esteem.

JOB DEMANDS AND WORK CHARACTERISTICS		
Study	**Outline of work**	**Outcome - List of recognised work-related stressors**
Hackman & Oldham (1975)	Job Characteristics Model - An early approach to job enrichment which identified 5 core characteristics. These form the basis of the Job Diagnostic Survey which measures the 5 core characteristics and derives the motivating potential score (MPS) for any job	Task variety; Task identity; Task significance; Autonomy; Feedback
Cooper (1986)	stressors intrinsic to the job	Shiftwork; Work overload/underload; Repetition and boredom
Sutherland & Cooper (1987)	A study of shiftwork in off shore oil workers	Work schedule (shiftwork, inflexibility, unpredictable/unsocial hours)
Warr (1991)	Review of research from four research perspectives: (a) work and non-work, (b) occupational stress,(c) job characteristics and satisfaction, and (d) socio-technical systems. Nine principal job features shown to influence job-related and context-free mental health (6 relate to job demands and role characteristics, 3 relate to individual characteristics and expectations)	Opportunity for control; Opportunity for skill use; Goals and task demands; Variety; Clarity; Physical security
Nilsson (1993)	ILO, the Swedish Trade Union Confederation stress the following matters as of special importance	Work organisation, the disposition and content of work, work tempo and monotony in work, forms of wage, working hours, training in work.

Cox 1993	Review article on early and contemporary studies on the nature of stress at work, it's effects on health and the way in which such knowledge is being applied in attempts to manage the problem	Role in organisation: Role ambiguity; Role conflict; High responsibility for people Decision Latitude: Low participation in decision making; Lack of control over work; Little decision making in work Task Design: Ill defined work; High uncertainty in work; Lack of variety or short cycles; Fragmented or meaningless work; Underutilisation of skill; Continual exposure to client/customer group Workload/Work pace Lack of control over pacing; Work overload or underload; High levels of pacing or time pressure Work Schedule Shift working; Inflexible work schedule; Unpredictable work hours; Long or unsocial work hours

INDIVIDUAL (characteristics, expectations and incidents)		
Study	**Outline of work**	**Outcome - List of recognised work-related stressors**
Holmes & Rahe (1967)	Influence of life-events	It is recognised that the impact of life events, which occur in the domestic environment can influence the well-being of employees or their colleagues. These events can be generalised across organisations. The impact is likely to be greater where the work environment is perceived as unsupportive.
Cooper (1986)	stressors intrinsic to the job	Poor person-environment fit
American Psychiatric Association, APA (1987)	Violence in the workplace	Link with violence in the workplace and post-traumatic stress.
Warr (1991)	Review of research from four research perspectives: (a) work and non-work, (b) occupational stress, (c) job characteristics and satisfaction, and (d) socio-technical systems. Nine principal job features shown to influence job-related and context-free mental health (6 relate to job demands and role characteristics, 3 relate to individual characteristics and expectations)	Availability of money, opportunity for interpersonal contact and valued social position.
Cox (1993)	Review article on early and contemporary studies on the nature of stress at work, it's effects on health and the way in which such knowledge is being applied in attempts to manage the problem	Career development: Career uncertainty, Career stagnation, Poor status or status incongruity, poor pay, Job insecurity, Redundancy and Low social value to work. Interpersonal relationships at work: Social or physical isolation, Poor relationships with superiors, Interpersonal conflict, Violence and Lack of social support. Home/Work interface: Conflicting demands of work and home, Low social or practical work at home and Dual career problems.

Arrendo (1996)	Study highlighting the importance of identifying and promoting individual development needs	It is acknowledged that there is a need to actively manage the diversity of needs within a workplace both in terms of personal or organisational development. The performance of individuals will be affected by their abilities and motivation. The performance objectives will be achieved where individuals are appropriately selected and trained for the roles they fulfil, and where they can have a shared vision and are committed to organisational goals. Establishing an active dynamic system which addresses both organisational and personal development needs can have positive performance effects.

APPENDIX 2

Specimen report - Stage I

Specimen Report

Organisational Stress Health Audit

by
Names of IOM researchers
Institute of Occupational Medicine

Client Contact:
Name of Company X Contact

August 1997

CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Stress at work is increasingly being recognised as a significant cause of sickness absence, at a reported cost to industry of £1.3 billion per annum (Health & Safety Executive). The Institute of Occupational Medicine (IOM) has been commissioned by the Health Education Board for Scotland (HEBS) to conduct a pilot research project to develop and apply methods for assessing organisational stress. The IOM has developed an Organisational Stress Health Audit (OSHA) aimed at providing a systematic approach to identifying potential work-related stressors at source. The OSHA is the first part of a three tier approach which goes on to investigate areas of particular concern and develop a control strategy.

Company X agreed to participate in this research to assess the feasibility of the first two stages of the approach. This report outlines the findings of the first Stage OSHA and presents general recommendations as well as proposals for detailed investigation in Stage II - investigation of major concerns. The proposals for Stage II will be discussed with representatives from Company X, following which the IOM will present a more detailed plan of work.

The aims were:

- To identify potential sources of work-related stress which may be having an impact on both the well-being of the employees and the performance of Company X.
- To produce general recommendations for risk reduction.
- To identify areas of particular concern and produce specific recommendations for further action (possible focus for Stage II)

Methods used to obtain and interpret company information were:

I. Initial discussions with company contact who co-ordinated the work on behalf of Company X
ii. Examination of selected items of company documentation
iii. Semi-structured interviews, conducted by two Occupational Psychologists and an Occupational Physician, with a selection of personnel from all levels and various departments within the organisation
iv. Analysis and interpretation of the information by IOM multidisciplinary team (Appendix A)

The findings:

The interviews identified the presence or absence of recognised work-related stressors; these are categorised under the following headings: Organisational structure; Change; Communication; Performance appraisal; Work Characteristics; Management/supervisory skills; Training; Sickness absence; Policy; and Staff support facilities

I. *General indicators and reported concerns*
Organisational indicators of ill-health are discussed and potential causes of work-related stress identified by the interviews are presented against a framework of widely accepted organisational stressors (see Appendix B). The most commonly raised concerns were; workload; quality of work relations; uncertainty and job insecurity; lack of resources; pressure to deliver services; pace of change and communication.

2. *Main areas of concern and recommendations for specific investigation*
Areas considered to have the greatest impact on the health and well-being of individuals and therefore on the performance of the organisation at large are identified, and recommendations for detailed investigation outlined. The areas are as follows:

- Review of identified hazards and prioritisation of recommendations.
- Investigation of work-related anxiety and general health among Group X workers.
- Review of current sickness absence policy
- Review of current appraisal system
- Training needs analysis

3. *General findings and recommendations*
The general findings are reported in Appendix C, in tabular form, from an organisational health perspective. These tables are presented in terms of strengths, weaknesses and opportunities under the categories listed at the top of this page.

BACKGROUND

1. INTRODUCTION

Stress at work is increasingly being recognised as a significant cause of sickness absence. A survey of self-reported work-related illness, published by the Health & Safety Executive (Hodgson et al, 1993), identified stress/depression as the second most commonly reported work-related illness (following musculoskeletal disorders).

The Institute of Occupational Medicine (IOM) has been commissioned by the Health Education Board for Scotland (HEBS) to conduct a pilot research project to develop and apply methods for assessing organisational stress. The IOM has developed an Organisational Stress Health Audit (OSHA) aimed at providing a systematic approach to identifying and controlling work-related stressors at source. The OSHA is the first part of a three tier approach which goes on to investigate major concerns and develop a control strategy. This approach is based upon commonly accepted causes of stress in the workplace (see Appendix B).

The rationale behind the approach developed by the IOM draws parallel with that for physical hazards eg. Control of Substances Hazardous to Health (COSHH). In such an approach, the first line of enquiry is not at the individual (ie. what problems is the individual experiencing or aware of) but in enquiring what and how substances are used by the organisation and what procedures are in place for controlling risks. As a result, subsequent specific investigations (eg. environmental monitoring and control actions) can be more focused on areas where hazards are thought to be presenting the highest risk.

The outcomes from the Stage I OSHA are two-fold. Firstly, to identify the presence or absence of recognised work-related stressors within the organisation and provide recommendations for risk reduction. Secondly, areas considered as having the greatest impact on the health and well-being of individuals and therefore the performance of the organisation at large are identified and recommendations for detailed investigation outlined. Such further investigations would use appropriate test instruments selected from published scientific literature. For example, where psychosocial problems are indicated, measures such as the Work Environment Scale (Insel and Moos, 1974) or the Job Diagnostic Survey (Hackman and Oldham, 1974) may be appropriate. Alternatively, where physical or environmental problems are identified, then measures such as the Body Comfort Questionnaire (Corlett and Bishop, 1976) or direct measurements (e.g. heat, noise) might be required. Many of these are instruments which may be used in a `bottom-up' (or individual) approach but, through first conducting the Stage I OSHA, any such administration can be more focused and more guided by identified needs rather than part of a `trawling' operation. In some circumstances, they may also provide a quick response measure for evaluating the impact of change, giving an early indication of effect before more objective benefits such as reduced sickness absence start to manifest themselves.

2. AIMS

The aims were:

- To identify potential sources of work-related stress which may be having an impact on both the well-being of the employees and the performance of Company X.
- To produce general recommendations for risk reduction.
- To identify areas of particular concern and produce specific recommendations for further action (possible focus for stage II)

3. METHODS

3.1 Preliminary Information

A general picture of the organisation was developed by examining policy statements, procedural documents and other documented texts. These were obtained from Company X via the company project co-ordinator.

3.2 Semi-structured Interviews

The preliminary information enabled the interviews to be tailored to the needs of Company X. The interviews were conducted by two Occupational Psychologists and an Occupational Physician from the IOM multidisciplinary team. Each interview lasted approximately 1.5-2 hours. The interviewees were chosen to represent all levels within the organisation. Interviews were conducted on a one-to-one basis, except for team leaders and employee representatives who were interviewed in groups of three or four. The purpose of the interviews was to obtain a picture of the organisation and its function and identify the presence or absence of recognised work related stressors, categorised under the following headings:

- Organisational structure
- Change
- Communication
- Management/Supervisory skills
- Training
- Staff support facilities
- Policies (including terms and conditions of employment)
- Sickness absence
- Work characteristics
- Contracts of employment

3.3 Analysis and Interpretation of Information

The information from these interviews was collated and analysed against an established database of material relating to the causation of stress. The interviewers then provided a summary report of this information to the IOM multidisciplinary team, who, considering these findings, discussed major areas of concern and proposed further actions.

3.4 OSHA report

This report presents these findings in the form of:

3.4.1 Organisational indicators of stress, potential causes and reported concerns

The general indicators of stress are presented, as well as potential causes of work-related stress against a framework of widely accepted organisational stressors (Appendix B). The most commonly raised concerns are also presented.

3.4.2 Main findings and recommendations for specific investigation

Areas considered to have the greatest impact on the health and well-being of individuals and therefore the performance of the organisation at large are identified and recommendations for detailed investigation outlined. These are presented as specific investigations, detailing: indicators; identified sources of stress; actions for further investigation.

3.4.3 General findings and recommendations

The general findings are reported, in tabular form (detailed in Appendix C), from an organisational health perspective. These Tables are presented in terms of strengths, weaknesses and opportunities under the headings listed above (see 3.2).

It should be borne in mind that the information presented is based on reports by staff at all levels within the various departments. The way in which people feel about a work related issue is important in influencing their health and well-being. Therefore, this report identifies where there is a mismatch between people's perceptions and actual policy and procedure, as well as identifying gaps in policy and procedure.

MAIN FINDINGS AND RECOMMENDATIONS

4. ORGANISATIONAL INDICATORS OF ILL HEALTH

Below are a number of factors which can indicate a prevalence of work related stress within organisations. Whilst it is acknowledged that these factors often take some time to manifest themselves, the following patterns were apparent in Company X.

4.1 Recorded Sickness absence

i. High levels of sickness absence, figure of 9% recorded for Department S
ii. High variation of sickness absence levels throughout organisation (dependent on department)
iii. Stress increasingly being reported as primary reason for sickness absence

4.2 Sickness presence

There were reports of high sickness presence, (ie working when not really well to do so)

4.3 Staff Turnover

High variation between departments. Department S (recording 9% sickness absence) also recorded high staff turnover. Reasons given by staff in this department for leaving were:-

i. Job insecurity
ii. Extreme workload
iii. Lack of promotional prospects
iv. Working conditions

4.4 Morale

This was variable with no real pattern, fluctuating both between departments and also within departments.

4.5 Behaviour

There were numerous reports of personnel displaying negative behaviour, ie more aggressive, short-tempered and unwilling to carry out any additional work

4.6 Performance

Stress was reported as having an effect on the performance of individuals. A significant increased error rate was reported in department S.

5. IDENTIFIED POTENTIAL CAUSES OF STRESS

There are a number of widely accepted causes of work-related stress. These are presented below with examples of some of those found to be present in Company X.

Examples of possible causes of stress:

a. General management and culture of the organisation
   - bureaucratic management style advocated throughout company
   - poor communication across departments

b. Role in the organisation
   - lack of clarity of roles and function
   - ambiguity of roles in Department S

c. Workload / Workpace
   - high workload/job pressures reported as excessive throughout all departments
   - reports of limited control over workpace by Department S workers

d. Decision-making (control)
   - employees report very little/no influence in general decision making process

e. Working conditions
   - high/exaggerated levels of risk perception related to chemicals and working conditions by Department S workers.

f. Appraisal
   - high level of negative reports concerning current appraisal system. Feedback rarely received, and usually only negative.

6. MAJOR CONCERNS

All the main concerns raised during the Stage I OSHA interviews were documented and a full list is tabulated in Appendix C. Detailed below are the five most commonly reported concerns raised for both managers and non-managers, during the OSHA interviews.

Managers	Non-Managers
Workload	Workload
Pressure to deliver services	Quality of working relations and equality of treatment
Uncertainty of future	Job insecurity
Lack of resources	Staffing levels
Pace of change	Communication

Figure 1: Main concerns expressed by both managers and non-managers during the OSHA interviews

RECOMMENDATIONS FOR SPECIFIC INVESTIGATION

Recommendations for further investigation are made on the following topics:-

1. Review of identified hazards and prioritisation of recommendations.
2. Investigation of work-related anxiety and general health among Department S workers.
3. Review of current sickness absence policy
4. Review of current appraisal system
5. Training needs analysis

I. Review of identified hazards and prioritisation of recommendations

The general findings and recommendations of the Stage I OSHA are documented in tabular form in Appendix C. The Tables are presented in terms of strengths, weaknesses and opportunities under the following headings: organisational structure; change; communication; performance appraisal; work characteristics; management/supervisory skills; training; sickness absence; policy; and staff support facilities.

These issues are addressed from a health perspective, i.e. how these organisational factors can impact on the individual and subsequently on the health of the organisation. Recommendations are made for tackling these organisational issues at source. It is recommended that these be systematically addressed, possibly through the development of a working group within Company X, identifying those of greater importance from a global perspective, and indicating actions for their implementation.

II. Investigation of work-related stress and general health among Department S workers

Aim: To examine the job characteristics of Department S workers in order to identify training, information and support needs; aiming to reduce causes of stress, promote individual health and well-being, and optimise performance.

Organisational indicators of stress:

- Sickness presence
- Sickness absence
  - -A number of personnel from other departments, and other levels within the company have reported concerns about the level of demands and working conditions within Department S. There is also a suggestion that stress-related problems are becoming more prevalent and making a more significant contribution to sickness absence, although not necessarily labelled as such.
- Performance
- Excessive risk perception

Potential causes of stress:

- Workload
  - - High workload, including overtime and shift-work
- Working conditions
  - - High/exaggerated risk perception of both chemicals used and actual working conditions
- Decision making/Control
  - - Reported little/no participation in decision making process
- Relationships at work/general management
  - - Poor management/ employee relations reported
- Job design
  - - High workpace, reported ergonomic problems
- Training
  - - No training (including skill based training) provided

Recommendations

1. Preliminary meeting and documentation
   - To discuss an outline of job requirements of the Department S role which may aid our understanding of work demands.

2. Process Meeting
- Representatives from each of the departments who regularly interact with Department S workers to meet together with IOM staff and discuss their expectations of this role.

3. Interviews
- Following the process meeting, interviews to be conducted with a number of Department S workers, and selected staff from the other groups who regularly come into contact with them. The following to be established through these interviews:

    - Objectives for roles in Department S
    - Task Analysis
    - Communications in place
    - Training requirements
    - Support systems
    - Working conditions
    - Each employee interviewed to complete the following scales: General health questionnaire (GHQ); Work Environment Scale (WES); and an anxiety questionnaire.

4. Outcomes
    i. To identify, in more detail, potential sources of stress among Department S workers.
    ii. To quantify work related factors (WES) and their impact in terms of general health (GHQ) and psychological well-being (anxiety questionnaire).
    iii. To identify training, information and support needs of Department S workers.

III. Review of current Sickness Absence Policy

Aim: To develop and implement an appropriate sickness absence policy.

Organisational Indicators of stress:

I. Current high levels of sickness absence and associated costs
ii. High levels of long term sickness absence
iii. Concern about the effectiveness of current systems and procedures in managing absence

Identified problems:

I. Computer support not yet available for systematic recording and monitoring of sickness absence trends
ii. Current sickness absence policy in draft format only - leading to ambiguity. Requires formalisation
iii. Occupational Health Service not currently involved in referral procedures. Scope for improvement - speedier decision of fitness on continuance of employment.
iv. Lack of support and clear advice on the management of specific absence cases
v. No clear policy on disciplinary procedures in relation to absence

Recommendations:

I. The existing system for recording sickness absence should be modified and put onto computer network to allow trends and causes to be recorded. This will assist in the monitoring of sickness absence.

ii. Opportunity to develop links with occupational health staff for support both on providing quick decisions on long term absences and also on management of absence.

iii. Develop steering group (occupational health, human resources, personnel etc) to assist in producing policy document

IV. Review of current Appraisal system

Aim: To develop and implement a system of appraisal for all employees across the company.

Concerns raised:

i. Lack of consistency across the organisation in terms of formal appraisal systems
ii. Lack of feedback, particularly positive feedback, the level of which is very management - dependent.

Potential causes of stress:

- lack of feedback on performance
- lack of clear objectives
- lack of control over work due to inability to negotiate objectives

Recommendations:

I. To establish a steering group within the organisation to develop an appropriate appraisal system.

ii. Review existing appraisal systems used by other organisations to assist with choice

iii. Commitment from senior management to provide assistance (time and finance) for personnel/human resources to support system

V. Training needs analysis

Aim: To develop and implement an appropriate strategy to address training needs

Indicators:
There was a general concern that training was a low priority within the organisation. In addition, there was no appreciable support system to address or implement training needs.

Potential causes of stress:
- Perceived lack of company commitment to training
- Staff report lack of confidence to complete certain aspects of their jobs due to lack of technical training (particularly Department S workers)
- Lack of awareness in terms of who is responsible for training

Recommendations:

- Commitment from senior management to provide support (time & finance) to provide a training appointment
- Needs analysis required to determine possible training gaps for all the roles in organisation (management and skill based)
- Identify 'experts' within roles and send them on 'train the trainer' courses
- Establish training review procedures

APPENDIX A

IOM Multidisciplinary Team

Miss Maria Butler - Psychologist
Miss Rebecca Lancaster - Psychologist
Dr Adele Pilkington - Occupational Physician
Mr Philip George - Psychologist
Mr John Allan - Finance Director
Dr Nigel Crawford - Director of Human and Physical Sciences
Dr Richard Graveling - Head of Human Sciences
Mrs Maureen Quinn - Personnel Manager

APPENDIX B

TABLE OF RECOGNISED CAUSES OF WORK-RELATED STRESS

Recognised causes of work related stress
(From Cox T, 1993)

	WORK CHARACTERISTICS	CONDITIONS DEFINING HAZARD
CONTEXT	Organisational function and culture	Poor task environment and lack of definition of objectives Poor problem solving environment Poor development environment Poor communication Non-supportive culture
	Role in organisation	Role ambiguity Role conflict High responsibility for people
	Career development	Career uncertainty Career stagnation Poor status or status incongruity Poor pay Job insecurity and redundancy Low social value to work
	Decision latitude/control	Low participation in decision making Lack of control over work Little decision making in work
	Interpersonal relationships at work	Social or physical isolation Poor relationships with superiors Interpersonal conflict and violence Lack of social support
	Home/work interface	Conflicting demands of work and home Low social or practical work at home Dual career problems
CONTENT	Task design	Ill defined work High uncertainty in work Lack of variety or short work cycles Fragmented or meaningless work Underutilisation of skill Continual exposure to client/customer groups
	Workload/work pace	Lack of control over pacing Work overload or underload High levels of pacing or time pressure
	Work schedule	Shift working Inflexible work schedule Unpredictable work hours Long or unsocial work hours

APPENDIX C

TABLES OF FINDINGS

**(A summary Table is provided for each of the sections included in the semi-structured interviews [section3.2 of template report]
The sections on organisational structure and change are included here for illustration)**

CHANGE		
STRENGTHS	WEAKNESSES	OPPORTUNITIES
Evidence of some focused management support with managers dedicated to managing service	Power base perceived within certain areas. Those in junior management roles can feel devalued .	Need to foster mutual respect of management and other roles
Striving for 'quality' within service provision and some success with specific initiatives	Differing concepts of quality across organisation. Perception of reduced quality due to increased bureaucracy	Develop PR with service users Encourage debate at strategic management level
Commitment to IT development	No coherent strategy on IT Current duplication of effort	IT as part of purchasing plan Negotiate networking with other companies
Expanding staff roles	Staff may have limited opportunity to use new skills	Ensure basic skill needs of job are met
Need for change accepted by most staff	Frequency and pace of change.Difficult to ensure all relevant parties are on board	Consider implementation on small scale and evaluate impacts of change
Has increased awareness of roles and responsibilities	Tendency for abdication of responsibility if out with personal area of expertise	Clear leadership and improved support from management grades
	Long term planning difficult due to current uncertainty	Reduce number of unknowns

ORGANISATIONAL STRUCTURE		
STRENGTHS	WEAKNESSES	OPPORTUNITIES
Steps towards flattening structure	Hierarchical Authority still delegated upwards Power base rests with small number of individuals	Willingness to develop more open style. Ensure progress made is not negated by pace of change
	Problems with ownership of responsibility	Improve clarity of boundaries within and between roles
	Power base lies with limited number of individuals `Them and us' culture still exists`	Communication initiatives provide opportunity for breaking down barriers
More staff involved in management of resources	Some managers feel professionally isolated .	Improved support would then enable managers with enhanced skills to develop staff below them.

APPENDIX 3

OSHA Evaluation Form - Stage I

OSHA EVALUATION FORM - Stage I

		PLEASE CIRCLE SELECTED RESPONSE
1.	Were you given enough information about the purpose of the interview?	Yes / No
2.	Did you feel that the interview addressed your needs?	Yes / No
3.	Did you feel that the interview addressed relevant causes of stress within your organisation?	Yes / No
4.	Did you feel that the interview addressed health and safety issues within your organisation?	Yes / No
5.	Were the questions presented clearly?	Yes / No
6.	What did you think about the length of the interview?	Too Long/ About right/ Too short

7. Do you have any comments about interviewer technique?

.....
.....
.....

8. Did you find any of the subject areas difficult to answer?

.....
.....
.....

9. Can you suggest ways in which the interview could be improved?

.....
.....
.....

10. How would you like to see the information gained from the interviews and recommendations to be presented to the organisation?

.....
.....
.....

11. Any other comments?

.....
.....
.....

Thank you for taking the time to answer these questions. Please return your form in the envelope provided.

APPENDIX 4

Stage II - Methodology and summary of findings

Stage II Methodology - Companies A and C

The findings of the first stage highlighted concerns about workload, level of support and resources among staff. Attention focused on a particular group of staff who's role requires a managerial as well as a technical component.

Organisational indicators of stress:

- Low morale
- High sickness absence

A number of staff from different levels and areas of the company reported concerns about the level of demands within the role, and the impacts on staff morale. There is also a suggestion that stress-related problems are becoming more prevalent and making a more significant contribution to sickness absence, although not necessarily labelled as such.

Potential causes of stress:

- Workload
  - High workload, including overtime and shift-work
- Decision making/Control
  - Although technically having responsibility for management, must meet often conflicting needs of Senior Managers and Consultant staff.No longer have direct supervision of support service staff.
- Work schedule
  - Shift work with responsibility for ensuring adequate staffing.
- Relationships at work/general management
  - Work within a multi-disciplinary team, responsibility for junior staff, and liaison with Senior Managers, Consultant staff, and support service, often with conflicting demands
- Job design
  - Dual role
- Career development/training
  - Often lack managerial training, often have limited time for professional development.

Aim

To examine the job characteristics of the dual role in order to identify training, information and support needs; aiming to reduce causes of stress, promote individual health and well-being, and optimise performance.

Rationale

In order to obtain a comprehensive view of the dual role it was proposed that two other roles also be studied (one performing predominately the technical part of the dual role and one performing predominately the managerial part of the dual role). In this way the impact of the dual role can be compared with the managerial component of one and the technical component of the other.

Methods

1. Process Meeting

Representatives from each of the three roles met together with IOM staff and discussed the requirements and their expectations of the dual role.

2. Semi-structured interviews

Following the process meeting, one-on-one interviews were conducted with 10 staff in the dual role and group interviews of 5 staff in each of the other two roles.

The following were established through these interviews:

- Objectives of the dual role
- Task analysis and information requirements
- Decision making; level of involvement
- The impact of change
- Communications in place, reporting structure
- Training requirements
- Support systems in place and requirements

3. Scales

Each person interviewed was asked to complete the following scales:

General Health Questionnaire (GHQ);
Work Environment Scale (WES);
Anxiety questionnaire.

In addition 10 other staff (5 from the technical role and 5 from the managerial role) were sent scales to be completed in order to increase the number of scale responses and thus give a more representative group for comparison.

It was thought that on-going changes at the site of the study may be impacting on the stress experienced by staff. A control group was identified from a variety of different sites in order to establish the impact of these ongoing changes. The control group, consisting of 10 staff also in the dual role, were sent the scales for completion.

Outcomes

This second stage identified stressors present in the dual role and also the technical and managerial roles; highlighting the training, information and support needs of each of these roles.

Stage II Summary - Companies A and C

Introduction / Aims

An Organisational Stress Health Audit (OSHA) was conducted in the companies to identify potential sources of work-related stress. In Stage I, a number of groups, were found to be experiencing high work pressures due to factors such as workload, multidisciplinary team demands and the responsibilities of a dual role . As a result, a more detailed Stage II study was undertaken of a specific group who experienced all of these potential stressors, to assess the specific pressures and the potential psychological and general health impacts, with a view to making recommendations on risk reduction measures.

Methods

Semi-structured interviews were conducted with a number of individuals from this group. Group interviews were also conducted with representatives of two comparison groups. These interviews explored issues such as responsibility, specific pressures, information, communication, change management, support and training. In addition, questionnaires were sent to all those attending interview, and an equal number of other staff from each of the groups represented. The questionnaires were: the General Health Questionnaire (GHQ); the Stress-Anxiety Questionnaire (SAQ); and the Work-Environment Scale (WES).

Results / Conclusions

When considering the amount of tension induced by the job (from the SAQ), managers reported higher levels than either of the other two groups assessed. However, the scores for all three groups were within the accepted range for the general population. Scores for physical tension and general fatigue were also within the range for all three groups.

The WES provides a measure of the social environments of work settings and assesses relationships, personal growth and system maintenance/change dimensions. The findings confirmed that workload was an important issue with all three groups of staff participants.

Summary of Potential Stressors

The interviews additionally allowed identification/confirmation of a number of potential stressors:

* dual role/time to manage;
* loss of support role;
* duplication of effort in administrative tasks;
* change;
* accountability issues and staff support; and
* professional development.

Recommendations

A number of recommendations are made to reduce work-related stressors including:

* provision of protected management time

* streamline management tasks, consider administrative support and IT requirements

* initiate refresher training courses, improve ongoing support during change and continue with multi-skilling initiatives

* review accessibility of staff support systems and increase the proactive nature of the Occupational Health Department

* review training needs

Stage II Methodology - Company B

Investigation of attitudes to change and the effectiveness of communication of change

Rationale

Company B had undergone rapid growth and this has brought with it continual change. These changes include: new products and services; restructuring; and upsizing. These are characteristic of a developmental culture and the impact of these changes may be perceived as beneficial or detrimental depending on whether or not individuals and groups of individuals share the same cultural values and beliefs.

It became apparent, in Stage I of this work, that people's attitudes towards the organisational changes that had been/are occurring within Company B varied a great deal. However it was perceived by most that the way in which the change had been communicated was poor.

Aims

I. To identify to what extent groups of individuals share the cultural values and beliefs of the organisation and whether there are differences between groups.

II. To identify sources of resistance to change among individuals

III. Based on the outcomes of I & II, to produce recommendations for communication of future change.

The study will address all sectors of the organisation to identify differences in attitudes and needs in terms of communication of change.

Methods

I. To identify whether certain groups of individuals share the cultural values and beliefs of the organisation and whether there are differences between groups.

Administer the 'Team Climate Inventory' which is a standardised self-administered questionnaire which identifies 'team climate' and 'innovation' within groups.

II. Identification of sources of resistance to change

A number of sources of resistance to change have been identified in the scientific literature (Nadler 1983). These include:

- Habit
- Security
- Economic considerations
- Fear of the unknown
- Lack of awareness
- Social considerations
- Low tolerance to change
- Lack of trust

A questionnaire was compiled to look at resistance to change among individuals and identify whether these correlate with: age; length of service; previous employment with the parent company; level within the organisation; job type.

Administration

The two questionnaires to be completed by a group of 70 staff, with approximately 10 staff working in each of the 7 following areas:

Field Operatives
Network Management Centre
Human Resources Team
Finance Team
Sales Team
Marketing Team
Operations Team

Names of willing participants to be sent to the IOM, following which questionnaires will be sent out directly to the participants who will return completed questionnaires directly to the IOM in order to ensure confidentiality.

Stage II Summary - Company B

Introduction/aims

Organisation B had undergone rapid growth and this has brought with it continual change. These changes include: new products and services; restructuring; and upsizing. It became apparent in Stage I that people's attitudes towards the organisational changes varied a great deal. However it was perceived by most that the way in which the change had been communicated was poor.

Therefore the aims of Stage II were as follows:

a. To identify to what extent groups of individuals share the cultural values and beliefs of the organisation and whether there are differences between groups.
b. To identify sources of resistance to change among individuals

Based on the outcomes of these investigations, it was the aim to make recommendations for the communication of future change.

Methods

Our aim was to assess all sectors of Company B on a cross-sectional basis. Therefore team leaders from 7 areas were asked to provide names of approximately 10 staff working together in each of the following areas: Field Operations, Network Management Centre, Human Resources, Finance, Sales, Marketing and Operations.

Names of willing participants were sent to the IOM. Unfortunately the company was only able to obtain agreement from 44 staff. Questionnaires were sent out directly to the participants who were asked to return the completed questionnaires directly to the IOM in order to ensure confidentiality. All participants were asked to complete the 'Team Climate Inventory' which identifies 'team climate' and 'innovation'in groups, and a questionnaire exploring possible sources of resistance to change, which was developed by the IOM team.

Of the 44 sets of questionnaires sent out, only 30 sets were returned. Two groups, Field Operatives and Sales, were particularly poorly represented and therefore it was not possible to include these groups in the 'Team Climate' analysis.

Results/ Conclusions

It should be stressed that the reliability of the results has been affected by the low response rate which represents 5% of staff from Company B, with a lower rate for specific areas. This is particularly pertinent for the Team Climate Inventory where low response prevented the inclusion of two groups in the analysis. There are however several useful trends identified across the company in the analysis of sources of resistance to change.

For all groups there was a commitment to team working and those team members included in the survey felt able to participate in decision making. There was no uniform agreement about team objectives but the level of variation was not likely to significantly impair team working.

All groups were also committed to achieving high standards of performance and were constructively critical about their work but it was felt that sufficient information and support with new initiatives was not always available.

There was a varying response to innovation between the teams. There was, however, evidence of a stable working environment within these.However, in general, team working within the teams assessed, seems to be functioning satisfactorily and this is also confirmed by the questions on team working in the resistance to change questionnaire.

Sixty two percent of participants felt that the pace of change was about right, although many conceded that the pace was fast and some had concerns about continued change at a similar rate. 35% thought that the pace of change was already too fast. It was felt that some individuals or teams were being left behind and that this problem would be exacerbated if future change continued at the same rate.

Only 10% of participants had a clear idea of the company's objectives over the next few years. 55% of participants had some idea of the company's objectives over the next few years, although 35% were not clear. All individuals reported an overall positive response to change and 50% reported an increase in job satisfaction.

However, it was felt that the development of new processes was a driving factor within the organisation and this limited time available for routine work, which meant that concerns were not effectively addressed and potentially limited time on specific tasks led to short cuts. It was also felt that the organisation was in a constant state of flux, and new developments were not always seen within a clear framework.

Recommendations

It is recommended that resources are directed to facilitating change within specific groups of employees and increasing levels of awareness of the need for change, steps involved in the change process and the specific outcomes anticipated as a result of a change process.

It is also essential for managers to recognise the transitional nature of the organisation during change, and to ensure that employees are kept fully informed to allow normal business to continue.

It is recommended that a strategy is developed for future planned change, that individual's responsibilities are clearly defined throughout the change process, and that adequate support is available for both teams and individuals during transitional phases within the organisation.

Having an effective system in place to evaluate change allows problems to be identified at an early stage within the change process, and information gained from this process can be applied to the planning of future change.

APPENDIX 5

OSHA Evaluation Form - Company level

OSHA EVALUATION FORM - COMPANY LEVEL

Company name:.....

1. Would you consider that you were given enough background information concerning the overall aims of the research study? YES / NO

   If No, what additional information would you have liked?

   .....
   .....
   .....

2. Would you consider that you were given enough information on the requirements, in terms of information and staff time from your company, of the research study? YES / NO

   If No, what additional information would you have liked?

   .....
   .....
   .....

3. Do you feel that you got enough support , in terms of guidance, information and level of contact, from the IOM? YES / NO

   If No, What additional support would you have liked?

   .....
   .....
   .....

4. (A) Approximately how much time did you spend introducing the research study to your organisation, ie excluding time spent on setting up Stages I & II)?

   Days/hrs =

   (B) Do you feel that by acting as co-ordinator for this study, your workload increased significantly?

   YES / NO

5. Did you feel that your organisation was supportive of the time and effort that your co-ordination role required?

   YES / NO

STAGE I Investigations:

6. Level of involvement: Approximately how much time did you spend on organising and arranging Stage I investigations (ie scheduling and arranging interviews?

   Days/hrs

7. For the method of recruitment that you adopted to select employees, eg personal contact, E-Mail, Cascade etc,:How successful did you find this method?

   .....
   .....
   .....

8. Did you have any difficulties arranging and scheduling the interviews? YES / NO

   If yes, please explain

   .....
   .....
   .....

9. In your opinion, were the organisational costs incurred, in terms of <u>personnel</u> time spent in interviews etc, for Stage I.

   HIGH / MEDIUM / LOW

10. Presentation of results: Were the results presented to you as you would have liked in terms of:-

    (a) Sending a draft report first

    YES / NO

    (b) Structure of report

    YES / NO

    (c) Level of detail of report

    YES / NO

    (d) Presentation by IOM researchers

    YES / NO

    Additional comments on presentation of Stage I results:

    .....
    .....
    .....
    .....
    .....

STAGE II Investigations:

11. In your opinion was the focus of Stage II investigations appropriate in relation to the findings of the Stage I investigations? YES / NO

12. Level of involvement: How much time did you spend on organising and arranging Stage II investigations

    Days/hrs

13. For the method of recruitment that you adopted to select employees,for Stage II investigations, how successful did you find this method?

    .....
    .....
    .....

14. In your opinion, were the organisational costs incurred, in terms of personnel time spent in interviews etc, for Stage II.

    HIGH / MEDIUM / LOW

15. Presentation of Stage II results: Were the results presented as you would have liked in terms of:

    (a) Sending a draft report first

    YES / NO

    (b) Structure of report

    YES / NO

    (c) Level of detail of report

    YES / NO

    (d) Presentation by IOM researchers

    YES / NO

    Additional comments on presentation of Stage II results:

    .....
    .....
    .....
    .....
    .....

In General

16. Possible benefits to your organisation: Has your organisation put in place (and evaluated) any of the recommendations as stated in your Stage I report? YES / NO

If Yes, please list and explain to what extent

.....
.....
.....
.....

If No, please explain

.....
.....

17. Has your organisation put in place (and evaluated) any of the recommendations as stated in your Stage II report? YES / NO

If Yes, please list and explain to what extent

.....
.....
.....
.....

If No, please explain

.....
.....

18. Would you recommend this approach to other companies YES / NO

If no, please explain why not

.....
.....

19. How does the IOM OSHA compare with other stress management techniques which you may have come across in terms of ?

a. Disruption to work routine HIGH / MEDIUM / LOW

b. Costs to organisation HIGH / MEDIUM / LOW

c. Identification of potential stressors GOOD / AVERAGE / POOR

d. A risk reduction process GOOD / AVERAGE / POOR

20. In your opinion do the benefits gained from the approach outweigh the cost of implementation? YES / NO

THANK YOU AGAIN FOR YOUR ASSISTANCE WITH THIS RESEARCH STUDY

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