Investing in Comprehensive Workplace Health Promotion

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INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

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A Word on How to Use this Resource

This resource sets out the general rationale, principles and practice of Comprehensive Workplace Health Promotion (CWHP). CWHP is an approach to improving the health and ultimately the productivity of a workforce through application of the principle that the best results in these two areas are achieved when both organizational and personal influences on these factors are targetted in the context of a strategic plan.

The evidence and rationale for this approach is summarized in this “core” document which ends with a strategy for applying the principles of CWHP called “The Business Health Investment Plan”. Supporting detailed evidence is provided in the form of separate “Companion Pieces” that can be referred to as needed. Should you wish to consult the practical application of CWHP principles (the “How To”) before considering their rationale (the “Why To”) please go directly to “The Business Health Investment Plan” (BHIP) which is at the end of this document. The BHIP does include an overview of the rationale by way of introduction. However, the most effective use of the BHIP, in our view, is when it is implemented in full knowledge of the rationale as explained in the following text and Companion Pieces.

This resource is an interpretation rather than a review of the mountains of research that are relevant to the CWHP. However, readers are encouraged to consult the Companion Pieces which explore the evidence underlying the statements made here in much greater depth.
Introduction

The purpose of this resource is to encourage and facilitate the implementation of **Comprehensive Workplace Health Promotion** in Canada both as an end in itself and as a means of pursuing organizational excellence.

**Comprehensive Workplace Health Promotion** is an approach to protecting and enhancing the health of employees that relies and builds upon the efforts of employers to create a supportive management culture and upon the efforts of employees to care for their own wellbeing.

CWHP is not a particular program or model. It is a philosophy, theory and practice of health promotion that is intended and designed to be incorporated into the Strategic Business Plans of organizations whose governors, owners and managers care about the wellbeing of their employees.

We believe that the CWHP approach belongs in the strategic business plan because what is good for employee health is also good for organizational productivity, efficiency and competitiveness. In fact, **health is produced or manufactured by the same processes as goods and services, so what sustainably determines the quality of one, sustainably determines the quality of the other.**

The material in this document and in the Companion Papers is intended primarily for health professionals working within specific workplaces or providing services to them. The rationale for CWHP in these materials is based largely on health arguments that are supported by business arguments (the “business case” for health promotion). The case is presented in this way in the hope that workplace health professionals will be able to use the facts and arguments found here to persuade senior management to engage in a process of study and action called “The Business Health Investment Plan”, described at the end of this document. A separate document entitled, “Building High Capacity through Investing in Whole people doing Whole jobs” is meant to appeal to CEOs and other senior officers who are, to one degree or another, ultimately accountable or responsible for all the outcomes of managerial practices including productivity, health and even “social capital”. This document (Building High Capacity) also directs readers toward the Business Health Investment Plan as a way of translating argument into action.

As an approach, rather than as a program or model, CWHP is open-ended. That is, it is an ongoing work in progress which can never be completed but which can be constantly updated and improved through experience.

Investing in Comprehensive Workplace Health Promotion
The Bottom Line

By the time you have finished reading this resource we hope you will be ready to give Comprehensive Workplace Health Promotion a chance to prove itself through changes you can implement in your workplace or practice. You may be a Human Resources Manager or a Wellness Coordinator; you may run the Employee and Family Assistance Program (EFAP) for your company or be on the committee that governs it. Whatever your role, there is something you can do – by word or deed – to advance CWHP.

In the end, CWHP will mean very little unless it is incorporated into the standard operating practices and culture of an organization. It is explicitly intended for incorporation into the Strategic Business Plan of your workplace or your clients’ workplace.
**How the Resource is Organized**

We want readers to come away with the conviction that CWHP makes sense from every point of view and that it can be built into the Strategic Business Plan of any organization.

To create this conviction, we have to make the case – the business case – to get you on board. To do this, we have organized the resource as follows:

1. Understanding how health is “produced” in the workplace and the **costs of doing nothing** to promote it.
2. The **costs and benefits of doing something**. Weighing our options.
3. Why **Comprehensive Workplace Health Promotion** makes sense: the Business Case.
4. **The Business Health Investment Plan**: a Business Plan based on active acknowledgement of CWHP principles.

In the document you are reading now you will find the **conclusions** that we have drawn from our analysis and interpretation of information from many different sources. We do not expect you to accept these conclusions or interpretations simply based on our word. For this reason we refer you at various points in the text to additional, more in-depth discussions of evidence that we call “Companion Pieces”. These are listed in the Table of Contents. Consistent with the open-ended nature of this project, we intend to add to these Companion Pieces as future funding permits.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

How Health is “Produced” in the Workplace and the Costs of Doing Nothing to Promote It.

Health, as we experience and observe it in the workplace, is produced or manufactured by two major forces:

1. **What employees bring with them to the workplace** in terms of personal resources, health practices, beliefs, attitudes, values and hereditary endowment.

2. **What the workplace does to employees** once they are there in terms of organization of work in both the physical and psychosocial sense.

In practice, these forces are not independent: they interact. For example, certain management practices can make it difficult for employees to care for their own health – things like unscheduled overtime or travel requirements, excessive time and energy demands and so forth. On the other hand, a workplace located in an area infamous for its heavy drinking practices can make life difficult for managers and supervisors as they struggle to prevent excessive or inappropriate alcohol use from translating into absenteeism, illness and accidents.

Research, until recently, was focussed more on the first force (“personal health practices”, for short) than on the second force (“organization of work”, for short), so there is more literature on the first than the second, at least with regard to the psychosocial aspects of working conditions. A substantial amount has been written on the effects of the physical environment of work in the context of Occupational Health and Safety. However, physical and psychosocial environments are connected by the fact that high level management choices and decisions about how work will be organized influence both of them very heavily.

When this interaction between the physical environment (“the safety of places and things”) and the psychosocial environment (“culture and climate”) is taken into account, their joint impact on health is massive. Given that these two aspects of the working environment also influence the abilities of individuals to care for their own wellbeing and to maintain their own “personal resources” (sense of efficacy, resilience, “hardiness”, quality and density of social support), the upstream role of the organization of work in the “production” of health turns out to be of profound significance. Chart 1 shows this picture in broad strokes and when we read about the effects of one force or the other, we need to keep in mind that both are operating at the same time whether the report or article says so or not.
Notes: - personal health practices can affect productivity in two ways: directly and indirectly. Directly, by “time-out” for things like smoking breaks, caffeine “fixes”, etc.; indirectly, by first affecting health (e.g. bronchitis) which then keeps the affected individual off work. “Personal resources” such as one’s sense of self-efficacy, hardiness or resilience and one’s quality or density of social support are like “brokers” between the organization of work and health practices. Such resources can ward off the negative effects of work organization on health practices (and conditions) but they can also be defeated themselves if these negative effects are relentless and sustained.

- organization of work can also affect productivity in two ways, directly and indirectly. Directly, through the design of physical and psychosocial work systems; indirectly, through management practices that cause anxiety, depression and other negative emotional states that are antagonistic to productivity in themselves and can also contribute to physical disease processes.

Although this is the “big picture” which we will want to keep as an anchor as we move on, it is necessary to begin a closer inquiry by looking at the two forces as though they were separate, because that is how research has typically dealt with them.

As noted earlier, we will limit statements in the main text to “bottom line” conclusions. Supporting evidence can be found in a set of Companion Pieces that can be explored as time and interest permit. These Companion Pieces take the form of bibliographies, research references, articles, brief bulletins and commentaries.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

How Health is “Produced” in the Workplace and the Costs of Doing Nothing to Promote It.

Impact of Personal Health Practices on the Health of Employees and on Employer Health Costs

The research literature usually deals with personal health practices (e.g. eating, exercising, sleeping, drinking, smoking, coping with stress) as “risk factors” for various disorders, diseases, or incapacities and for the absenteeism and health care costs associated with them. There is little room for doubt that as the number of risks associated with health practices increases, negative health consequences increase also. (Companion Piece 1)

Although this is the general conclusion, different studies show wide variations in the degree and intensity of negative health consequences such as higher health claim costs (including drugs and use of medical/paramedical services), absenteeism and disability. Many factors may explain these variations, including differences in study methods, measurements, characteristics of workforces and so on. However, the most confounding factor of all – and one that is rarely discussed in this type of study – involves the organization of work. There is every reason to believe that the degree to which personal health practices as “risk factors” translate into negative health outcomes depends on the extent to which the management culture of the workplace supports health. This point will be explored further in the next section.

The problems with comparing methods in the studies on this subject make it difficult to provide concrete conclusions beyond the facts just stated. However, a fairly typical conclusion goes like this: if you take those employees who have three or more risk factors (e.g. they are seriously inactive, they smoke, they drink too much and they are overweight), they are likely to have 50% more absence from work than those employees who have no such risk factors. (Chart 2) Again, the absolute size of this High Risk Group (3 or more risk factors) will vary from one workplace to another, leading to major differences in the total impact on health costs and productivity. However, it is not uncommon to find that multiple risk employees cost their employers two to three or more times the amounts accounted for by other less “risky” employees in terms of services, drugs, short-term disability and other more casual forms of absenteeism.
As noted earlier, “Personal Resources” such as self-efficacy, hardness, resilience, quality and density of social support act like “brokers” that moderate the effects of the organization of work on health practices and health. While they are clearly very important influences on health, they are rarely targeted as such in workplace interventions. Most commonly, they are approached through design features in Health Promotion Programs. These are discussed later under “Program Content and Design Prerequisites”. Personal Resources are also targeted in the context of management practices that either reinforce or corrode them. This aspect is discussed later under “supportive management climate”. For these reasons we do not devote a separate section to discussion of Personal Resources, although in Health Canada’s “Workplace Health System” they occupy a more prominent position.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

How Health is “Produced” in the Workplace and the Costs of Doing Nothing to Promote It.

Impact of Organization of Work on Health of Employees and on Productivity, Efficiency and Competitiveness

The most significant research in this area has been done in the context of how the organization of work can induce stress which in turn affects both health and productivity. More specifically, a quartet of stressors that are disproportionately influential contributors to adverse health outcomes have been identified in the last few years. These are High Demand coupled with Low Control and High Effort coupled with Low Reward. (Companion Pieces 2a, 2b)

- **High Demand** means having too much to do in too short a time over too long a period.
- **Low Control** means not having enough influence over the way your job is done on a day to day basis.
- **High Effort** means having to expend too much mental energy over too long a period.
- **Low Reward** means not receiving adequate feedback on performance, acknowledgement for work well done, recognition.

These conditions of work are measurable and can be compared. When employees score at the high ends of scales that measure these factors it has been found that they are far more likely to suffer a wide range of adverse health outcomes ranging from cardiovascular disease to immune system disorders, anxiety and depression (Chart 3).

**Chart 3**
The Costs of an Unhealthy Workplace

**How to Read the Chart:**

**Example**

*Employees under sustained conditions of High Effort/Low Reward and High Pressure/Low Control are 2 to 3 times (2X-3X) more likely to contract infections than other employees.*
These conditions of work arise more often by choice than by chance. Usually, there are some choices open to managers or owners even when the nature of the work constrains them to some extent. And it is on these choices that employees focus when contemplating whether or to what extent their employers are fair. A sense of fair play turns out to be extraordinarily important as a link between the stresses of high demand/low control, high effort/low reward and the health outcomes reviewed in Chart 3. When these conditions are seen as arising to any significant degree from managerial choices to organize work that way, employees are likely to feel unfairly treated. And these feelings translate into a biochemical cascade from mind to body that contribute to the inability of the immune system to defend itself against bacterial and viral assault.

Very recently, low control has been isolated as a contributor not only to illness but also to incapacities such as poor memory, lack of adaptability to change, loss of creativity, poor learning and coping skills. (See Companion Piece 2b)

The process linking low control and these incapacities has been shown to involve actual changes to the brain’s structure including nerve cell shrinkage and nerve cell death. Consequently, it is now clear that management practices that foster low control among employees contribute not only to illness but also to the defeat of those very skills that organizations need among their workforces to deal with the onslaught of relentless change characterizing the modern workplace. (Chart 4).

Chart 4
Health and Capacities “Produced” at Work, Productivity and Social Capital

Note: both “health” and “capacities” are resources for productivity; but they are also social resources that contribute to “social capital”, which is the engine that keeps us socially, economically and politically viable.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

How Health is “Produced” in the Workplace and the Costs of Doing Nothing to Promote It.

Impact of Organization of Work on Health of Employees and on Productivity, Efficiency and Competitiveness

While estimates of this kind are still in their infancy from a scientific point of view, it is reasonable to assert at this time that differences in management practices (controlling for type of work) can produce radically different health outcomes the costs and benefits of which are transferred or exported from the workplace to society at large. In fact, the “worst” workplaces are estimated to produce harm to health at 3 or more times the rate characteristic of the “best” workplaces in the same economic sector in the same geographic area. (Companion Piece 2c)

As our thinking on the role of management practices evolves, it becomes more and more evident that the connections between health, productivity and social capital outcomes could all be captured within a broader concept of “organizational capacity”. This idea is explored in the resource paper entitled “Building High Capacity through Investing in Whole People doing Whole Jobs”. There, “capacity” is defined as ‘the ability of an organization to govern itself in such a way as to optimize results for employers, employees and society at large”. These results include productivity, health and social capital. This is sometimes referred to as “the triple bottom line”.

How Health is “Produced” in the Workplace and the Costs of Doing Nothing to Promote It.

Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness

The impact of personal health practices and organization of work considered as separate forces on health, productivity, efficiency and competitiveness is clearly of great importance, as hopefully the foregoing discussion will have persuaded you. However, as noted earlier, these two forces are not fully separable in real life so we need to understand how they interact to produce an even greater impact on the outcomes above. It is fair to say that the whole (the forces acting together) is greater than the sum of the parts (the two forces considered separately).

Our best evidence for this assertion comes from research that looks at these two forces at the same time with the same people in the same place. There is not very much of this research, but what there is tells us that stress originating in the organization of work is highly correlated with employee health practices and conditions that are hostile to their wellbeing. (Companion Piece 3) These health practices and conditions include low activity levels, being overweight, smoking and heavy alcohol use. Unquestionably, stress from domestic sources is also involved in this picture, but again, home stress and job stress play off one another making it difficult if not impossible to distinguish the head from the tail of the snake. Although the processes connecting job stress, home stress and personal health practices are complex, one fairly clear link is the fact that highly stressed people often find it very difficult to pay sufficient attention to the maintenance of their own wellbeing. This neglect can take the form of not getting enough sleep, overmedicating, smoking, excessive alcohol consumption, poor dietary practices, inactivity and so on.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Costs and Benefits of Doing Something to Promote Health: Weighing Our Options

So far we have considered the effects of two major forces on health, productivity, efficiency and competitiveness. Now we need to look at what happens when deliberate efforts are made to affect these forces in some way, either by influencing employee health practices or by modifying the organization of work, or sometimes both. This translates into a review of two areas of health-related interventions, as follows.
The Costs and Benefits of Doing Something to Promote Health: Weighing Our Options

1. The Impact of Health Promotion Programs (HPPs) on Health and Productivity

Research on the cost-effectiveness of HPPs goes back many years. The “art and science” of HPPs have now reached a point where professional students of the field believe they can derive a set of “best practices” among the mass of published and unpublished material. Our own reading of the literature supports this conclusion, so the emphasis in this resource is on the conditions under which HPPs are most likely to succeed. A bibliography is provided that directs your attention toward a few particularly noteworthy studies. (Companion Piece 4)

For present purposes, “success” means:

- Showing that targeted groups (e.g. “high risk”) were actually reached by the program at some pre-set level of penetration (e.g. 50% of a population known to have high blood pressure as defined by specific criteria.)
- Showing that, once enrolled, participants were retained to program completion at some pre-specified level (e.g. 75% retention)
- Showing desired outcomes at some level that is considered practically meaningful (e.g. 25% of participants lowered their diastolic blood pressure by 5%, 10%, 15%, etc.)
- Showing that desired health outcomes translate into efficiencies such as reduced absenteeism, lower claims costs etc.

We need to consider two sets of conditions under which HPPs are more likely to be cost-effective. The term “cost-effective” usually refers to some form of ratio between expected/desired program outcomes and the costs of designing and delivering the program (e.g. more “health”, less “costs”). A typical expectation is that program gains (however measured) should exceed program costs. In more liberal “cost-benefit” analyses the criteria may be relaxed somewhat to include “value for money”. For example, program costs may exceed program gains in financial terms but this is still considered good value because certain gains (e.g. morale, good will, trust) are beyond quantification. In the following, the conditions for success that we describe are relevant for both cost–effectiveness and cost-benefit. These conditions are: program content and design prerequisites and environmental or contextual prerequisites.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Costs and Benefits of Doing Something to Promote Health: Weighing Our Options

1. The Impact of Health Promotion Programs (HPPs) on Health and Productivity

Program Content and Design Prerequisites

Within the variety of HPPs there are certain common characteristics or features that predict success, whether the program involves smoking cessation, stress management, nutrition, activity, alcohol use or whatever, and whether it aims “merely” to inform and raise awareness or to change beliefs and attitudes or to change actual behaviour. These characteristics or features are:

1. Attention to the needs of individuals to set their own health-related goals and to approach them in a step-wise, incremental fashion. This need can be addressed effectively by assessing and taking stock of the individual’s “readiness to change” and of what the individual is, or is not prepared to do at the time the program or intervention is offered. **This is the principle of personal control or “self-efficacy”**.

2. Attention to the variable needs of individuals for social support as they plan and carry out activities designed to improve their health in some way. This could for example, mean using a “buddy” system to achieve some difficult objective such as weight loss or smoking cessation; or it could mean enlisting the active collaboration of family members in making sustainable changes to the content of meals, or the method of their preparation. **This is the principle of social support**.

3. Attention to the fact that health practices are frequently interdependent e.g. smoking, alcohol use and caffeine use are often related through complex situational “triggering” processes. Sleep disruptions and patterns of rest and recreation are often keyed to exercise habits and nutritional practices. It is imperative, therefore, that the design of programs focussed on any one health practice should also pay attention to the manner in which other health practices serve to reinforce it either negatively or positively. **This is the principle of interactivity**.

4. Attention to the fact that everyone has some health risks –
some more than others – and everyone has health needs. These risks and needs are no respecters of age, gender, occupation, culture or socio-economic status, even though patterned variations according to these variables can be seen. This means simply that programs have to be designed to meet the preferences, aptitudes and requirements of a wide variety of participants, particularly taking into account variations in life stage, education, culture and language capacity. This is the principle of wide appeal.

5. Attention to the fact that people are increasingly strapped for time and energy and need, as much as possible, programs and services to come to them rather than the other way around. This means providing programs in forms that are easily accessible to people who may be at the earliest stages of readiness to change and whose motivation to begin working on some aspect of their health may be fragile at best. Sometimes, this need for easy access can be served best by helping potential participants with the financial resources to seek out their own programs in the communities where they live rather than where they work. Or, it can involve making programs available by Internet in workplaces that can support this kind of infrastructure. This is the principle of convenience.
Program design prerequisites of the kind we just reviewed are necessary but not sufficient for cost-effective outcomes. It is also essential that the workplace environment be supportive of employees’ efforts to take care of their own health. This means mainly two things: management support and a supportive management climate. These are related but still somewhat separate conditions.

1. **Management Support** refers mostly to ensuring that employees understand and actually feel the commitment of their employers to the protection and promotion of their wellbeing. This commitment may appear in various forms but it usually will include:

- providing a physically safe working environment
- making at least some time available to employees during working hours for health promoting activities
- making resources available in the form of preferred programs (given the limits of operating budgets) in preferred modes of delivery (e.g. “virtual”, live group, expert-led, self-help, etc.)
- demonstrating interest through requiring accountability from program deliverers/coordinators, etc. on a regular basis
- providing a “family-friendly” workplace through flexible worktime policies, giving adequate notice of travel requirements, etc.
- providing personal leadership through exemplary behaviour – e.g. taking part in programs, sharing personal health challenges and strategies to respond to them, etc.
2. **Supportive Management Climate** refers to organizing work in ways that promote rather than defeat health and safety. Essentially, this means keeping demands on time and energy within reasonable bounds, maximizing the degree to which employees participate in the governance of their own work (including the maintenance of a physically safe environment) and providing adequate recognition and acknowledgment for work well done. In this regard, it seems it is the serious intention of management to create these working conditions that lies at the heart of the connection between organization of work and health. Many errors can be made and forgiven in trying to achieve these optimal conditions if it is clear by word and deed that there is authentic will to do so. Employers who demonstrate this will are more likely to be seen by their employees as fair and respectful. It is fairness and respect that are the foundations of a healthy workplace and it is within such environments that specific health promotion programs are more likely to be cost-effective.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Costs and Benefits of Doing Something to Promote Health: Weighing Our Options

1. The Impact of Health Promotion Programs (HPPs) on Health and Productivity

Making Sense of the Evidence: Weighing Our Options

There is a large body of data from studies looking at the cost-effectiveness of HPPs. The results of these studies appear to be wildly contradictory when we first look at them. However, one of the biggest problems with weighing the evidence – and therefore our options – is lack of comparability between studies. And it is here that we feel obliged to make an interpretive comment that hopefully will help readers gain some perspective when considering the results of any specific study. The comment is this. If we take the programmatic and organizational prerequisites for cost-effectiveness of HPPs discussed in the preceding two sections and use them as a template for analyzing the methods and results of specific studies we will find that very few reports even tell us whether or to what extent these prerequisites were met. This is in all likelihood a major clue to the reason for discrepancies in cost-effectiveness evaluation-study results. It is basically an “apples and oranges” problem: things that cannot be compared are being compared.
If this is true, then our conclusions on the cost-effectiveness of HPPs have to be stated in a very careful manner. However, the following statement appears to be justified. When HPPs are run according to the principles and under the conditions described in the preceding two sections, and assuming that these programs have been purchased at fair market value, they are very likely to show outcomes that at least offset the purchaser’s investment in them and are reasonably likely to show a positive return on investment. It remains necessary to use the language of likelihood to describe this conclusion because there are many ways of defining costs, effectiveness and benefits as noted earlier.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Costs and Benefits of Doing Something to Promote Health: Weighing Our Options

2. The Impact of Organization of Work Interventions (OWIs) on Health and Productivity

Interventions that are designed to have an effect on how work is organized will have an effect on employee health whether this is intended or not. However, most of the research on the effects of OWIs ignores this fact, so we are left to deduce from such studies what their probable impact on health was. While such deductions carry some weight as evidence, they are far from totally convincing. For example, a study that shows an increase in employee control or influence and in employee rewards as a result of an OWI directed at management styles would lead us to anticipate improvements in employee health indicators. But this would have to be seen as presumptive or circumstantial evidence in the same way that smoking cessation is presumed to reduce the likelihood of cancer and other diseases. We have the population-wide data that tell us smoking and cancer are linked and we assume, every time we do a smoking cessation program, that if we reduce tobacco consumption we will reduce the incidence of cancer. The same is true of OWIs directed at the kinds of management/governance styles that have been implicated in a wide variety of adverse health outcomes (refer back to Chart 3). We assume that successful modifications to these styles will produce superior health outcomes. However, at the end of this resource we suggest ways in which you can prove or disprove this for yourself through a self-directed strategy called “The Business Health Investment Plan”, or BHIP.

There are some studies that specifically look at the health effects of OWIs, whether these were intended or not. (Companion Piece 5) The usual reason for including any measure of health is its presumed effect on productivity. Most of the measures are only obliquely related to the health status of employees – indicators such as absenteeism, health claim costs (drugs, services), disability are typically used. Another measure, employee job satisfaction, is a somewhat more direct measure of mental health. Generally speaking, it appears that reductions in costs associated with absenteeism, claims, disability, etc. are found in conjunction with increases in productivity and profitability. However, it is not clear from such studies whether improved health was the driver of cost reductions or whether such reductions result from efficiencies introduced in the course of improving productivity. Neither is it clear whether such changes are sustained.
These same studies, however, tend to show that employee job satisfaction is the last thing to show improvement as a result of OWIs. However, when employee job satisfaction becomes the focus of OWIs a different picture emerges: not only is it possible to increase employee satisfaction but also it is possible to thereby improve customer/client satisfaction, an outcome that has notable effects on profitability by increasing consumption of goods and services. (Companion Piece 6) Intervenors in the “service-profit chain” realize that employee satisfaction and consumer satisfaction are intimately connected and they go after improvements in the one to achieve superior outcomes in the other. And leading edge research in the area identifies the same notion of fairness that we pinpointed earlier as lying at the heart of the work stress/health connection. Fairness, in the sense of keeping promises, turns out to be as much a central ingredient of customer satisfaction as it is of employee satisfaction.

The synergism between health, productivity and the organizational forces that influence these outcomes are further explored in the parallel resource paper entitled: “Building High Capacity through Investing in Whole People doing Whole Jobs”.

Investing in Comprehensive Workplace Health Promotion
INVESTING IN COMPREHENSIVE WORKPLACE
HEALTH PROMOTION

The Joint Impact of Health Promotions Programs (HPPs) and Organization of Work Interventions (OWIs) on Health and Productivity

If we take the conclusions of the foregoing sections seriously it becomes clear that we need to promote health not only for its own sake but also in order to improve productivity. It is equally clear that the known determinants of health should be addressed simultaneously in order to achieve sustainable gains in productivity. This means dealing with the two major forces acting on health as it is observed in the workplace: personal health practices and organization of work. However, we have learned that real change is likely to occur only under certain conditions. HPPs will be effective only under conducive managerial conditions; conducive managerial conditions are primarily those that stimulate employee job satisfaction, a key element of which is a perceived equitable balance between demand and control, effort and reward.

At this point in time we can deduce from the evidence and arguments presented so far that it makes good business sense to address health issues in order to improve productivity. We can even point to the specific aspect of health that should be our entry point – it is employee job satisfaction, some of the key ingredients of which are known to us. But there are few cases in the published literature in which the synergistic effects of addressing the two forces simultaneously can be actually demonstrated. One noteworthy exception is a Dutch study reviewed in Companion Piece 5. This project intriguingly reveals some of the benefits and the challenges of attempting HPP/OWI “synergisms”. Outside of the published material is the so-called “gray” or “fugitive” literature and, beyond that, the “stories”. Even when hard data are available, the stories behind them, the stories that provide meaning and context, are rarely provided, making it all but impossible to document why health is affected positively in some cases and not in others. Consequently, we stand at the point in time where we need stories – good stories, bad stories, indifferent stories – about the visceral processes involved in trying to bring about change in the health and productivity of workforces where a comprehensive approach has been taken.
We hope that our use of the term “comprehensive” will not be misunderstood. By “comprehensive”, we mean addressing both forces acting on health simultaneously and in concert, i.e. personal health practices and organization of work. We do not mean simply employing a wide range of HPPs – a sense in which the word “comprehensive” is frequently used in workplace health promotion literature. Using a wide array of HPPs may be part of a comprehensive approach, but it is not the defining feature of it.

Notwithstanding the absence of hard data on the effectiveness of comprehensive approaches as we define them we can still make a forceful business case for the pursuit of such measures based on the evidence we have reviewed concerning the costs of doing nothing and on the doubtful outcomes of single-force approaches to improving health and productivity. How this evidence resolves itself into the Business Case for CWHP is the subject of the following section.

1 Recall that “personal resources” such as self-efficacy, hardiness, resilience, quality and density of social support as influences on health are “embedded” in both “personal health practices” and “organization of work” for purposes of this document.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Business Case for Comprehensive Workplace Health Promotion (CWHP)

In the previous sections we established the foundations of the Business Case for Comprehensive Workplace Health Promotion. Now we review these foundations and examine how the business case is built upon them.

First, we have seen that the origins of health as it is observed in the workplace lie as much in the organization of work as in personal health practices. Second, we have presented evidence that there is an interaction between these two forces, or sets of influences on health and we have argued that singly and in interaction these forces have a significant impact on productivity and competitive advantage. Third, we have argued that these forces can be influenced by deliberate interventions. The most effective interventions, we said, are likely to be those that address the manner in which management practices affect employee health combined with programs aimed at helping employees help themselves. We noted that there is an intimate connection between fairness and health that shows itself most clearly in employee perceptions of how superfluous stress is sometimes brought into existence by managerial choices rather than by accident.

To convert this knowledge into a business case, however, requires an extra step of logic. To take this step we need to accept first of all that a “business case” for health promotion goes beyond financial motivation to include a desire to produce goods or services in ways that harm neither the employees who perform the work, nor their families, nor their communities nor the broader society in which all of these function. These ultra-financial motives have a moral or ethical basis that has deep social origins. In other words, the business case for CWHP has moral and social elements to it, as well as economic elements.
If we can accept the multidimensional nature of the business case as outlined, then its main arguments emerge as follows:

1. Health, and the costs associated with maintaining it, are “produced” in the workplace by two forces: the personal health practices of employees (here understood to include “personal resources”) and the organization of work (which concerns itself with both physical and psychosocial aspects).

2. Of the two forces, organization of work is the more important not only because of its direct impact on mental and physical health but also because it influences personal health practices. It is appropriate, then, to describe the organization of work as a driver of health and health-related costs.

3. The key aspects of organization of work that influence health are management and governance practices. Choices about the organization of work made by managers and governors shape both the physical and psychosocial environments of the workplace, even though the nature of the work to be done constrains these choices in varying degrees.

4. Choices about demand, control, effort and reward are critical influences on employee health. Perceptions of the fairness with which decisions concerning the organization of work are made are a crucial link between these choices and employee health.

5. Where high demand/low control, high effort/low reward conditions prevail, negative health outcomes appear in numerous forms at much higher rates than those seen under more benign and positive managerial conditions. (see Chart 3 for a review).

6. These negative health outcomes represent significant costs to employers and can be safely predicted to have a negative impact on efficiency, productivity and competitiveness.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Business Case for Comprehensive Workplace Health Promotion (CWHP)

7. The same adverse management conditions that have negative effects on employee health also have negative effects on employee capacities such as flexibility, adaptability, creativity, memory, learning. Since these employee capacities are crucial to corporate survival in times of rapid change and need for maneuverability it is safe to identify high demand/low control, high effort/low reward conditions as defeaters of productivity from this perspective also.

8. Strong relationships exist between employee job satisfaction (as related to demand/control, effort/reward balance, and perceived fairness) and client, customer, consumer satisfaction (including also perceived fairness) as expressed in purchase of goods and services. Consequently, an unbroken chain of causation extends from management practices via employee health through to the bottom line.

9. The predictability or foreseeability of health harms from adverse management practices means not only that they can, at least to some extent, be prevented but also that they should be prevented according to widely accepted social norms concerning responsibility for consequences. Broadly speaking, the foreseeability of harm to health resulting from adverse management practices can be thought of as attracting a proactive, “constructive” duty of diligence to avoid such harms. This is really little more than an ethical extension of the notion of due diligence found in occupational health and safety law.

10. The foreseeability of harm from health-hostile management practices extends beyond the horizon of the workplace itself to encompass the families of employees, their communities and society at large. The social requirement to avoid such harm (which parallels the requirement not to pollute the environment through the byproducts of manufacturing, rendering and extraction processes) translates into a duty of stewardship that can be seen as falling on the shoulders of workplace governors and leaders as well as on managers.

11. The costs of avoiding harm to health resulting from adverse management practices overlap to a considerable degree with the costs of improving productivity and customer/client consumption of goods and services since both involve deliberate efforts to boost employee job satisfaction.
12. The effectiveness of HPPs aimed at personal health practices is heavily dependent upon a supportive managerial climate characterized by deliberate, visible efforts to maintain or restore balance between demand and control, effort and reward, so creating a climate of fairness.

13. Within the context of such supportive managerial climates, there is solid evidence that employee health gains can be obtained through HPPs and that the cost of obtaining them is frequently far less than the savings realized.

14. Again within the context of supportive managerial practices, adherence to certain principles of HPP design and implementation raises the odds that these programs will yield cost-beneficial results. These have been defined as the principles of personal control or self-efficacy, social support, interactivity, wide appeal and convenience. (see earlier section on “Program Content and Design Prerequisites”)

15. The most cost-effective yields from interventions designed to improve the health of employees are predicted to come from synergism between Organization of Work (OWI) and Health Promotion Program (HPP) initiatives in the context of what we have termed Comprehensive Workplace Health Promotion.

Much remains to be learned about these synergistic effects and this is a challenge that can best be addressed in the predictable future by individual workplaces acting in an experimental manner.

In order to provide a framework for this kind of experimentation, we offer the following “Business Health Investment Plan”. The BHIP is meant to allow you to determine for yourselves to what extent the theory of Comprehensive Workplace Health Promotion will produce tangible benefits in both employee health and organizational productivity.
The Business Health Investment Plan (BHIP)

Introduction

The BHIP is a self-directed application of Comprehensive Workplace Health Promotion principles.

It is a way of identifying and modifying key forces acting upon the health of employees and consequently, on the organization’s productivity. These forces are: personal health practices (including personal resources) and the organization of work (as it relates to both the physical and psychosocial environments).

The BHIP, consistent with CWHP theory, assumes that organization of work is the critical point of intervention. Attention to personal health practices comes later, once a more health-conducive business culture has been developed.

The idea of “business health culture” is at the centre of the BHIP. It has a very specific meaning in this context. It refers to the amount of balance that exists between job demands and control, and between job effort and reward. The Business Health Culture of an organization can be assessed by using a simple survey that yields a measurement called the “Business Health Culture Index” or BHCI. The BHCI is a numeric expression of the relationship between key job stressors (demand, effort) and key job satisfiers (control, reward).

The BHCI is a reflection of upstream drivers of downstream health related costs which themselves are typically measured through indicators such as absenteeism, injuries, insurance claims, and use of services such as EFAPs. Increasingly, we see close relationships between BHClIs and consumer/client/ customer satisfaction indicators. (Chart 5)

The BHCI is produced as a number ranging from –2 to +2.
A score of “0” means “business neutral”; i.e. the health culture of the organization neither contributes to, nor obstructs achievement of the business objectives of the organization. Scores below 0 are moving in the business negative direction and scores above 0 are moving in the business positive direction. “Business negative” means that the health culture of the organization obstructs achievement of its business objectives. “Business positive” means that the health culture of the organization facilitates achievement of its business objectives. Clearly, this is a matter of degree. However, the BHCI provides a basis for goal setting. e.g. In the example just given, an organization could set a goal of attaining a business-positive health culture by simultaneously lowering stress levels and raising satisfaction levels so that on resurveying the workforce the offset score is +1.0 or above. The achievement of this goal is expected to result in positive changes in Business Health Cost Indicators that can be monitored over time.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Business Health Investment Plan

Introduction

Chart 5

Business Health Culture Index (BHCI)

Genesis: Leadership “Drivers”

BHCI = Balance between
Demand: Control
Effort: Reward

Health “Impactors”
- Fitness
- Stress
- Fatigue
- Nutrition
- Use of alcohol, tobacco, drugs
- [cost of services and benefits]

Health “Indicators”
- Absence from work: illness, injury
  - Commitment, Motivation
  - Loyalty
- Use of services, benefits
  - Cost of claims

Customer/Client Satisfaction,
Retention, Behaviour
Armed with knowledge about the Business Health Culture of the organization, it becomes worthwhile to examine other factors that directly or indirectly impact health costs. These “Impactors” include:

- Employee Fitness/Activity levels
- Employee Stress levels
- Employee Sleep/Fatigue levels
- Employee Nutrition practices
- Employee Smoking, Drinking, Use of Drugs (medical and nonmedical)
- Links between these levels and practices
- Pricing of goods and services by providers of insurance and benefits

Many of these factors (those relating to Personal Health Practices and Personal Resources) can be assessed through additions to the same survey that is used to derive the BHCI. Consideration of pricing of goods and services delivered by providers of insurance and benefits requires a separate strategy based on audit and review of supplier practices. This is a specialized task for which, ideally, specialists should be used. We believe that this audit and review process is an important part of the BHIP, and recommend that it be commissioned using either internal or external expertise.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Business Health Investment Plan
Using the BHIP

A simple process based on common sense principles can be used to implement the BHIP. It can and should be adapted to suit the needs of specific workplaces. But here are the general guidelines.

1. Appoint a task force to carry out the design of the BHIP. The composition and size of this group will vary from one organization to another. Our generic recommendation is that
   • The most senior members of the organization that can be dedicated to this task be appointed to govern it.
   • A commitment be made to incorporate the BHIP, as it evolves, into the strategic plan of the organization.
   • Accountability should run from the chair of the task force to a senior executive (otherwise the exercise will be futile).
   • Where unions are present, they should be represented at the most senior level possible.
   • The task force should be staffed by people with diverse perspectives and expertise. In addition to senior management and union representatives, the following have been shown to act well together under many circumstances: EFAP, OHS committee members, HR professionals, Wellness staff. The more broadly participative and inclusive the task force process is, the more likely it is to be health-promoting in its own right and therefore part of the solution to organizational problems that may be identified through the procedures described below.

2. Review indicators of health through analysis of records concerning:
   • absenteeism (casual, S.T.D., L.T.D.)
   • injuries/WCB claims experience
   • medical/surgical/paramedical services
   • drug claims
   • other health-related use of benefits
   • EFAP experience
This review focuses on not only the rate at which these costs accrue, but also on the elements of these costs. In other words, what are the reasons for absence, injuries, use of services etc.

However, reasons may not be the same thing as causes. For example, observing that one of the major reasons for absenteeism (at least according to official records) is mental health problems tells us little about causes. At this stage, it is important to suspend judgement about causes until later in the process.

3. Develop or request a set of financial or service quality indicators that illustrate the efficiency, effectiveness or productivity of the organization. This could include net value of sales, service quality evaluations, shareholder value, etc. Use these indicators as benchmarks against which later follow-ups can be compared after deliberate attempts have been made to influence the health of the workforce.

4. Assemble your data in the form of a report and relay this report to Senior Management (CEO or Senior VP).

5. Determine, through this consultation, to what extent the situation described in the report is acceptable. This will probably not be a “yes or no” answer: there may be “hot spots” that you can easily identify emerging in particular parts of the organization. Or, there may be some “good news” stories. These are worthy of note in their own right and could become the subject of what is being termed “appreciative inquiry” – a process by which the ingredients of success are analyzed, learned from, and applied elsewhere.

6. If it is deemed that action is required, move to the next step. It is too early yet to set objectives until the drivers of the problems are identified.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

The Business Health Investment Plan
Using the BHIP

7. Identify Business Health Cost Drivers and Impactors. Drivers are located in the Organization of Work. Impactors are (with the exception of pricing practices discussed earlier) the Personal Health Practices of employees.

This process of identification is best carried out through a survey. Two examples of such surveys are appended – one longer, one shorter. Both have been extensively tested. (Companion Pieces 7a, 7b)

The longer version solicits from employees information that deals with drivers, impactors and indicators. The shorter version deals only with drivers, and one indicator, namely self-reported health status. As noted earlier, drivers are assessed through the use of the Business Health Culture Index (BHCI) which yields essential information about the ratio between stress (demand/effort) and satisfaction (control/reward) at an individual and collective level.

With the shorter and longer versions of the survey you have the option to go straight for the bullseye (the drivers) or to provide yourselves with a broader picture of drivers, impactors and even some self-reported indicators.

8. If you decide to go with the shorter questionnaire, you can probably analyze the results yourself with the aid of the instructions included with the survey. The longer questionnaire can be analyzed internally, but it is likely to be more efficient to seek the assistance of a third party. In both cases, interpretation of the results is best carried out within the framework of Comprehensive Workplace Health Promotion as described earlier in this resource.

9. Develop a plan of action focussing on the results and interpretation of the BHCI. The value of the BHIP is that it draws attention to the main drivers of health as it is manufactured in and by the organization of work. This is the time for setting objectives in relation to the balance you want to see between demand and control, effort and reward within a certain time frame.
If you decide to take aim at personal health practices also bear in mind that the effectiveness of HPPs will depend to a significant degree on the effectiveness of the strategy you adopt to achieve a more health-promoting balance between demand and control, effort and reward.

10. Setting objectives in the framework of the BHCI automatically provides a basis for evaluation of your plan’s effectiveness since you can determine in advance what amount of change you want to see in the BHCI within a specific period of time. The results of this comparison between BHCI at two or more points in time will tell you to what extent your interventions are having the desired effect on health cost drivers. At the same time, periodic reassessments of health and health-cost indicators should be undertaken to determine the actual effect of modifying the drivers on outcomes such as absenteeism, disability, claims experience, etc. Similarly, the set of financial or service quality indicators referred to in #3 above can be revisited.

The approach just described is one that relies on making cause-effect connections based on putting health data alongside productivity data. Clearly, this approach has its limitations. Its strength lies in simplicity, its weakness in the doubt that may arise when “other causes” for changes in productivity are suspected. This margin of doubt can be reduced by careful monitoring of the process through which the BHIP is introduced and implemented. The more dots you can join through documentation, the surer you can be of cause-effect relationships.
INVESTING IN COMPREHENSIVE WORKPLACE HEALTH PROMOTION

Companion Pieces

1. Costs of Doing Nothing: references

2(a). Stress, Satisfaction and Health: tuning for high performance

(b). Illness, Injury and Recovery: the fairness connection


3. Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness
   • Notes and Commentary on Selected Studies

4. Costs of Doing Something: references

5. Organization of Work Interventions and Health Outcomes
   • Notes and Commentary on Selected Studies

6. The Business Case for a Healthy Workplace (by Danielle Pratt)

7(a). Long Survey

(b). Short Survey
Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #1
‘COSTS OF DOING NOTHING’

A List of References

January, 2001
‘COSTS OF DOING NOTHING’

List of References

January 3, 2001

Note: key articles are in bold type


‘COSTS OF DOING NOTHING’

List of References

January 3, 2001

Note: key articles are in bold type


‘COSTS OF DOING NOTHING’

List of References

January 3, 2001

Note: key articles are in bold type


Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #2A
STRESS, SATISFACTION & HEALTH AT WORK:
Tuning for high performance

Martin Shain, S.J.D.

Published in OHS Canada
April/May 1999 pgs. 38-47
as “Stress and Satisfaction” (slightly modified)
STRESS, SATISFACTION & HEALTH AT WORK:
Tuning for high performance

Some managers verge upon apoplexy when they hear the word “stress”. It annoys them intensely. They feel that stress is a lame excuse used by poor performers who try to exonerate themselves from blame and to fix it instead upon their employers whom they perceive as heartless, calculative and oppressive. Stress, some managers believe, is a notion invented by the weak in an attempt to level the playing field in their favour. It is an unfair strategy, they argue, because it disguises personal moral failings behind an intellectual mask of spurious generalities about the organizational sources and effects of stress on health and safety.

Many employees, on the other hand, persist in the belief that stress at work is a very real, organizationally produced phenomenon that wrecks needless harm upon their mental and physical health and places them at risk for a variety of injuries.

Where does the truth lie? In this writer’s view, it is essential that the evidence be known and understood by both management and labour because a failure to do so stands in the way of progress toward a healthier, safer, more productive and more competitive economy. We need to move beyond blame to a new empirical position where evidence has the first and last word.

In my opinion the importance of the relationship between employee stress of certain kinds, health, safety, performance at work and organizational efficiency has been established beyond a reasonable doubt in scientific terms. There is, however, a reluctance to accept and act upon this evidence. I think that one of the main reasons for this is a failure on the part of scientists to specify what they mean by stress and what they have found out about it in terms that cannot be ignored or misunderstood.

In the first place, we have to narrow our field of inquiry and redefine our major area of concern. The kind of stress that has been implicated in serious harm to employee health is not simply cumulative worries, annoyances and concerns. Rather, it is a specific set of conditions that are created or produced by the way work is organized and designed. Some of these conditions can be modified to produce a high
performance edge and it is these upon which we should focus our attention.

The scientific evidence on stress, health and performance has concentrated in recent years upon two paradigms: the Demand/Control Model (Karasek and Theorell, 1990) and the Effort/Reward Imbalance Model (Siegrist, 1996). The essence of these models is the empirically verified proposition that too much demand coupled with too little job control and too much effort coupled with too little reward are stressors complicit in the production of numerous types of illness and injury. These harms range from the common cold to cancer and include various types of injury such as repetitive strains and back problems. An important aspect of the research on the two models is that the amount of stress required to produce harmful outcomes is increasingly quantifiable and measurable.

Since the health outcomes attributed to High Effort/Low Reward conditions are very similar to those attributed to High Demand/Low Control conditions they are summarized below together. Increasingly, it seems that both pairs of conditions are likely to co-exist in the same workplaces although not all adverse outcomes are simultaneously observed, given differences in type of work and means of production.

Health Effects of Adverse Working Conditions: Summary

1. High Demand/Low Control conditions at the extreme (highest 25% Demand level, lowest 25% Control level) compared with High Demand/High Control and Low Demand/High Control conditions are associated with:
   - more than double the rate of heart and cardiovascular problems
   - significantly higher rates of anxiety, depression and demoralization
   - significantly higher levels of alcohol and prescription/over the counter drug use
   - significantly higher susceptibility to a wide range of infectious diseases

   (Gardell, 1982; Greenberg and Grunberg, 1995; Johnson et al., 1996; Karasek and Theorell, 1990; Matthews et al., 1987; Theorell et al., 1997)
STRESS, SATISFACTION & HEALTH AT WORK: Tuning for high performance

2. High Effort/Low Reward conditions at the extreme (highest 33% Effort level, lowest 33% Reward level) compared with High Effort/High Reward conditions are associated with:
   - more than triple the rate of cardiovascular problems
   - significantly higher incidence of anxiety, depression and conflict-related problems
   (Bosma et al., 1998; Siegrist, 1996)

3. High Demand/Low Control conditions and High Effort/Low Reward conditions are associated with:
   - higher incidence of back pain (up to 3 times the rates found in High Demand/High Control and High Effort/High Reward conditions)
   - higher incidence of Repetitive Strain Injuries (excess rates of up to 150% have been reported)
   (Polanyi et al., 1997; Shannon et al., 1996; Shannon et al., 1997; Smith, 1997)

4. A combination of High Demand/Low Control and High Effort/Low Reward conditions are implicated, along with other more general workplace stressors in the precipitation of colorectal cancer. People experiencing such adverse conditions had over 5 times the rate of colorectal cancer in one recent well-conducted study.
   (Courtney et al., 1993)

5. There is strong evidence to suggest that many of the adverse health conditions listed above are linked. The processes responsible for the link can be traced often to the functions of the psychoneuroimmunological (PNI) system. (Kiecolt-Glaser and Glaser, 1995). Mind-body connections can be found, for example, in the aetiology of infections, cardiovascular diseases, certain types of cancers, injuries and hard-to-diagnose pain. (Cohen et al., 1991; Courtney et al., 1993; Kiecolt-Glaser and Glaser, 1995; Smith, 1997; Steptoe et al., 1997; Theorell et al., 1997; Polanyi et al., 1997; Shannon et al., 1997)
Persuasive though this evidence is, the way in which it is presented can stand in the way of finding constructive solutions. We can say, quite correctly and appropriately, that the “demand and effort” parts of the two models just sketched are often not highly modifiable because the nature of the work dictates its pace and the type of labour required to meet the demand. This leaves the “control and reward” parts of the models that are, in theory at least, amenable to change through different types of management decisions.

Numerous studies indicate that when management chooses to find ways of increasing employee control and reward, benefits can be expected in regard to decreased rates of almost all adverse health outcomes of the kind we can measure over relatively short periods of time. These outcomes include reductions in injury rates, absenteeism due to infectious diseases, anxiety, depression and certain types of pain. (Elden, 1986; Gardell, 1982; Greenberg, 1986; Johnson and Johansson, 1991; Kaplan and Rankin, 1993; Macy and Izumi, 1993; Painter and Smith, 1986).

However, if the whole discourse about control and reward is allowed to remain in the area of stress, we may be missing an opportunity to confront the issue in a more constructive manner. Another approach to the control/reward issue is to redefine it as a matter of job satisfaction rather than a matter of job stress.

Recently, in a series of workplace surveys of employee health, we had the opportunity to redefine the way in which demand relates to control and effort relates to reward by constructing a Stress/Satisfaction Offset Score (SSOS) in which markers of demand and effort were seen as stressors and markers of control and reward were seen as satisfiers. We were then able to assign every employee who took part in the survey a score based on the relationship between these specific stressors and these specific satisfiers in their particular work life.

Once every employee has an SSOS it is an easy matter to group them according to the range of scores in which they fall.
STRESS, SATISFACTION & HEALTH AT WORK: Tuning for high performance

The SSOS is constructed from answers to four simple questions in the employee health survey, yielding two subscores and a final score derived from them, as follows:

<table>
<thead>
<tr>
<th>SATISFACTION Subscore (Range 0-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REWARD [I feel I am well rewarded for the level of effort I put out for my job]</td>
</tr>
<tr>
<td>plus</td>
</tr>
<tr>
<td>INVOLVEMENT [I am satisfied with the amount of involvement I have in decisions that affect my work]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRESS Subscore (Range 0-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESSURE [work stress in last six months from too much time pressure]</td>
</tr>
<tr>
<td>plus</td>
</tr>
<tr>
<td>FATIGUE/EFFORT [work stress in last six months from mental fatigue]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRESS SATISFACTION OFFSET SCORE (SSOS) (Range -2 to +2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SATISFACTION SUBSCORE minus STRESS SUBSCORE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUSINESS HEALTH CULTURE INDEX (BHCI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE SSOS for the workforce as a whole</td>
</tr>
</tbody>
</table>

< When the score is negative, it means that stress outweighs satisfaction.
< When the score is positive, it means that satisfaction outweighs stress.
< When the score is zero, it means that stress and satisfaction cancel one another out.

At a corporate, as opposed to an individual employee level, the SSOS becomes a Business Health Culture Index (BHCI) which is simply the mean (average) SSOS for the workforce as a whole. The Index is a measure of the extent to which the Health Culture of an organization is working for or against its Business Objectives. Health Culture, for these purposes, simply means the relationship between certain stressors and satisfiers at work.

< If the BHCI is negative, it means that the health culture is characterized by more stress than satisfaction.
< A Business-Negative Health Culture is one that works against the achievement of business objectives, whether these objectives are product-related or service-related.
< If the BHCI is positive, it means that the health culture is characterized by more satisfaction than stress.
< A Business-Positive Health Culture is one that works for the achievement of business objectives.
Assignment of employees to SSOS groups enables us to describe them according to a variety of health related criteria contained in the survey. For example, we can show how SSOS groups vary significantly in terms of self-reported health status, absence from work and a variety of personal health practices which themselves can be combined as a Multiple Health Risk Score.

1. **STRESS, SATISFACTION AND HEALTH STATUS**

<table>
<thead>
<tr>
<th>SSOS Group</th>
<th>Health Status (Self-Report)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent, Good, Fair, Very Good, Poor</td>
</tr>
<tr>
<td>Negative Score (-1, -2)</td>
<td>48% → 52%</td>
</tr>
<tr>
<td>Positive Score (+1, +2)</td>
<td>70% ← 30%</td>
</tr>
</tbody>
</table>

2. **STRESS, SATISFACTION AND ABSENCE FROM WORK**

<table>
<thead>
<tr>
<th>SSOS Group</th>
<th>Days Absent in Last Year Due to Illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Score (-1, -2)</td>
<td>4.6 days</td>
</tr>
<tr>
<td>Positive Score (+1, +2)</td>
<td>2.9 days</td>
</tr>
</tbody>
</table>

3. **STRESS, SATISFACTION AND HEALTH RISK**

<table>
<thead>
<tr>
<th>SSOS Group</th>
<th>Multiple Health Risk Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Zero &amp; One Risk</td>
</tr>
<tr>
<td>Negative Score (-1, -2)</td>
<td>28% → 72%</td>
</tr>
<tr>
<td>Positive Score (+1, +2)</td>
<td>52% ← 47%</td>
</tr>
</tbody>
</table>

**Notes:**
- based on a sample of 3,400
- neutral score (zero) SSOS group excluded.

**Multiple Health Risks are:** low physical activity frequency; bodymass index in the overweight category; trouble sleeping at least once a week; high level of dissatisfaction with eating habits; any smoking; alcohol consumption greater than 21 drinks per week.
STRESS, SATISFACTION & HEALTH AT WORK:
Tuning for high performance

The advantage of the SSOS approach is that it contains not only a description of the problem but also a strong intimation of solutions. For example, the simple fact of describing the problem as an imbalance between stress and satisfaction points to a solution based on reducing the former and raising the latter. Usually, one or both are possible to some degree.

However, it is easy to miss the wood for the trees even with the SSOS approach. Consequently, we need to focus even more sharply on what is important about the relationship between stress and satisfaction. In a word, the most important thing is fairness, the perception that the manager is doing the best he or she can to maintain an optimal balance between stress and satisfaction. Look at the next diagram in which Negative Offset Score employees are compared with Positive Offset Score employees according to their satisfaction with the fairness and respect they receive at work.

4. STRESS, SATISFACTION AND FAIRNESS

<table>
<thead>
<tr>
<th>SSOS Group</th>
<th>Satisfaction with Fairness, Respect at Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Score (-1, -2)</td>
<td>21% → 25% → 53%</td>
</tr>
<tr>
<td>Positive Score (+1, +2)</td>
<td>82% ← 8% ← 10%</td>
</tr>
</tbody>
</table>

Look also at what the different SSOS groups want their employer to do to help them improve their health. The focus is clearly on managerial decisions that facilitate openness, sensitivity and employee involvement.
5. STRESS, SATISFACTION AND EMPLOYER’S ROLE IN IMPROVING EMPLOYEE HEALTH

<table>
<thead>
<tr>
<th>Employer Role</th>
<th>SSOS Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>(-1, -2)</td>
</tr>
<tr>
<td>Communicate more openly with employees</td>
<td>58%</td>
</tr>
<tr>
<td>Train supervisors/managers in sensitivity</td>
<td>56%</td>
</tr>
<tr>
<td>to employee concerns</td>
<td></td>
</tr>
<tr>
<td>Get more employee input on how work is</td>
<td>47%</td>
</tr>
<tr>
<td>done</td>
<td></td>
</tr>
</tbody>
</table>

All this concern about the relationship between stress and satisfaction would be idle, however, if nothing could be done about it. But lots can be done about it. We have two kinds of evidence to support this view. First, we have evidence to show that different workplaces doing the same kind of work yield significantly different mean average SSOS scores (or Business Health Culture Indices). Second, we have evidence to show that workplaces can modify conditions of work over time so that stress decreases and satisfaction increases. Both the differences and the changes mentioned above are mainly attributable to management choices and decisions that pay varying degrees of attention to employee control and rewards.

Clearly, increased attention to control and reward requires a significant effort on the part of managers at all levels. But the commitment of the most senior officers of the organization is indispensable to a successful transition from what Labonté refers to as power-over to power-with relations of employment. (Labonté, 1995).
STRESS, SATISFACTION & HEALTH AT WORK:
Tuning for high performance

Some managers will persist in the belief that in providing greater control to employees they themselves will lose it. This objection cannot be lightly dismissed. In many cases, however, the objection is based on fear of the unknown and unfamiliarity with the mental state accompanying “power-with” relationships. Managers who have been bold enough to enter the initially ambiguous world of such relationships, however, find often that their persistence pays off in terms of greater personal satisfaction from exerting leadership rather than directorship.

Personal transitions of this nature tend to be hard won. But a stimulus to try may be the knowledge that managerial behaviour of the “power-over” variety can be harmful to the health of employees in some alarmingly quantifiable ways. Few managers are likely to be entirely comfortable with the idea that their “power-over” behaviour presents reasonably foreseeable risks to the wellbeing of others and may come to believe that the most diligent course of action would be to attempt some sort of transition to “power-with” relations. Such a managerial commitment to change is probably the key to effectively shifting the Stress/Satisfaction ratio in favour of employee satisfaction.

The Stress/Satisfaction Offset approach to health protection in the workplace is self-benchmarking. It yields a personal and an organizational baseline that contains within it directions for improvement of the stress/satisfaction ratio. From this improvement we can reasonably anticipate a variety of gains in the health of the workforce with concomitant advantages in the form of reduced health care costs and advances in productivity. A latent but potent driver of these gains is likely to be an increased sense of fairness and respect among employees leading to an overall improvement in employee buoyancy and morale.
References


References (cont.)

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Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #2B

ILLNESS, INJURY AND RECOVERY: The fairness connection

Martin Shain, S.J.D.

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as “The Fairness Connection” (slightly modified)
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ILLNESS, INJURY AND RECOVERY: 
The fairness connection

Research on workplace stress over the last 25 years has confirmed in broad terms that conditions of work characterized by high demand/high effort and low control/low reward generate a high level of threat to employee health and safety.

Recently, it has been proposed that one of the key factors linking these conditions of work to harm is the common perception and feeling among employees that such conditions are unfair. This “sense” is thought to arise from a predisposing belief that such conditions of work come about not by chance but by choice - the choice of managers and supervisors in particular. Employees believe that alternative choices could be made that reduce demand and effort and increase control and reward without economic loss to the employer. (Shain 1999)

Just as these psychotoxic conditions of work are associated with a higher chance of getting ill or injured, so too are they associated with a lower chance of making a full and speedy recovery, returning to work and readjusting successfully.

The purpose of this article is to address the question: how can workplace dynamics - fairness in particular - affect the recovery of an employee who is outside the workplace - be it at home or in the health care system?

To begin answering this question we need to see the workplace as part of a web of interdependent influences on employee health that incorporates the home, health care system and community.
ILLNESS, INJURY AND RECOVERY: The role of fairness
ILLNESS, INJURY AND RECOVERY: The fairness connection

In terms of the individual employee’s consciousness or subjective experience, the workplace is an elastic and a very invasive place - in fact, it is an idea as well as a place, so it comes home with us and is, in a sense, with us all the time. Therefore, the quality of worklife clearly influences how people feel even when they are not at work as many studies have shown. This is often called the “Spillover Effect”.

So, a period of work-related injury or illness is a period of much-increased workplace influence. Even though the ill or injured employee is absent from work physically he or she is very much there emotionally and spiritually.

The period of debilitation, however long, can represent a very real intrusion of workplace into home - it is the uninvited guest at the employee’s beside, the unwelcome companion at every meal. If the employee has negative feelings about the workplace to begin with the normal psychosocial factors that influence employee wellbeing at work are multiplied in their effect away from work. Conversely, if the employee has positive feelings these can facilitate the recovery process. (Kenny 1998, Linton 1991, Tate 1992, Theorell and Karasek 1995, Dyck 2000)

So, disablement (temporary or otherwise) is a very volatile period for mental health and the direction it takes, and that recovery takes, depend a great deal on how the employer was perceived pre-injury or illness.

In order to understand how fairness at work affects both the chances of getting sick or injured and recovery, we need to look more closely at what is coming to be called the “Sociobiological Translation”. (Tarlov 1996) This has been defined as a mechanism by which human beings receive messages about the social environment and convert these messages into biological signals that trigger the processes of disease development or health promotion. Key to the Sociobiological Translation is the biochemistry of emotions. In recent years much has been learned about emotions and their effect on the body. (McEwan 1998) For present purposes, our interest lies in what we might call the “Biochemistry of Fairness”. Fairness is a term we encounter or use just about every day, but it is nonetheless invested with many different meanings. Here, I want to focus on fairness as keeping promises and on unfairness as breaking promises. In particular, I want to characterize the employment contract as a set of promises. (Tyler et al. 1997)
When employees perceive that one or more of these express or implied promises have been broken, they are likely to experience a range of negative emotions. If it is correct, as it appears to be, that conditions of work characterized by high demand/high effort and low control/low reward are seen by many employees as breaches of the employment contract (“I didn’t sign on for this: this is unfair”) then a cascade of emotions can be predicted to flow from this perception that include feeling to one degree or another:

- excluded
- tricked
- rejected/abandoned
- disliked
- unworthy/worthless
- diminished/humiliated
- shamed
- anxious/agitated/insecure
- depressed
- angry/enraged
- suspicious
- helpless

These mental states are unpleasant and undesirable in themselves and beyond a certain point they can turn into mental disorders that keep people from functioning properly. Even worse, if sustained over a lengthy period, or if there are one or more acute episodes of unfairness, these feelings, among some people, can lead to a sense that

- nothing and no one can be trusted
- there is no order, purpose or meaning in life
- things don’t make sense
- all is not right with the world
ILLNESS, INJURY AND RECOVERY: The fairness connection

A simpler way of saying all this is that when people feel they have been treated in a seriously unfair way they no longer feel quite whole and crave some kind of remedy that will make them feel whole again. This is the heart of the fairness health connection.

It is also the heart of the connection between fairness and return to work because when employees feel they have become sick or got injured as a result of working conditions that were unfair they are likely to associate the employer with their sense of incompleteness and hold him or her responsible.

This is more than mere symbolism. When employees identify the workplace as the source of their incompleteness they will crave remedies that go far beyond anything money can pay for. But on the other hand, when money is the only remedy at hand, every problem becomes financial just as when the only tool available is a hammer, every problem becomes a nail.

Standing back from the specifics of the research that has been done in and around fairness and health, it appears to me that the real story is one of how broken promises get translated into diseases and injuries. And more than that, it is a story of how crossovers from the exercise of legitimate authority by employers to the exercise of raw power represent transitions from a fair and respectful workplace to an unfair and disrespectful workplace.

If power is the ability to get things done through coercion or the threat of it (be it physical, psychological, financial or legal) then the unilateral imposition of conditions of work characterized by high demand/high effort and low control/low reward is an example of its exercise. As such, this imposition is likely to be seen as unfair because it lacks consent by definition.

Power, according to the definition just given, is always taken, never given and so in a very visceral sense the crossover from authority to power relations in the workplace is likely to be seen and felt as a breach of promise or breach of trust, a violation of implicit but fundamental terms of the employment relationship that call for a safe system of work. There is nothing safe about a system that strips employees of the information and influence that they need to protect their own mental and physical wellbeing, particularly where the employer is seen as having a choice in the matter.
But what actually happens in the brain and body when people feel unfairly treated? To answer this question, we need to look at the research that explores the health impact of power relations on subordinates. In this body of research, subordinacy in power relations is seen as a type of stress the effect of which is potentiated by the sense that it is unfair. (e.g. Brunner 1996; McEwan 1998)

Different people respond in different ways to this stress (depression, anxiety, anger) and the effects can be potentiated or mitigated by the personal resources available to the individual involved. e.g. social support can play a significant role both in defining or not defining an event as stressful and in coping with the strain if it is so defined.

When depression and anxiety do result from exposure to perceived stressful and unfair conditions, however, the impact of these mental states on physical health can be serious. The pathways from mental to physical health vary according to whether anxiety or depression is the trigger, but between them these states have been found to cascade into the following outcomes:

- Reduced Adaptability
- Reduced Ability to Cope with Change
- Impaired Learning
- Impaired Memory
- Increased Helplessness
- Increased Passivity, OR,
- Increased Aggression/Conflict

Increased rates of:
- Heart/Circulatory Diseases
- Immune function disorder
- Some cancers
  - Mental disorders
  - Substance abuse

The mechanisms by which these outcomes come about are clearly very complex but in broad terms they involve actual physical changes in the brain, including nerve cell atrophy or death, and threats to the ability of the immune system to protect the body against a wide variety of disorders. (McEwan
ILLNESS, INJURY AND RECOVERY: The fairness connection

1998)

One of the true ironies about the use of power in the workplace, judging from research evidence on how subordinacy affects capacities, is that it defeats its own objects. If power is meant to garner control, then it appears to do so to a degree that can render some employees almost useless in terms of their ability to cope with or adapt to change, learn new skills and generally roll with the punches. Given outcomes like these, even in purely calculative terms, power is inefficient as a means of governing the workplace. If we take into account the “externalities” produced by the power-driven workplace (“social exhaust”), the inefficiencies mount up since some of the costs are passed on to society at large. These costs are reflected in the price of, and burden upon the health care, social service and justice systems; costs that eventually lead to tax increases at all levels of government. Unfortunately, it is more difficult to put a scrubber on social exhaust than it is to put one on a smoke-stack.

In light of this kind of research, the mechanisms by which the stress of unfairness in the workplace can lead to not only higher rates of illness but also to longer and less successful recovery can be re-conceptualized as a single continuous process that is in many ways predictable and foreseeable. Very little of what has been said here is original: we have known about the health endangering properties of stress for a long time. However, the contribution of the present article lies hopefully in pulling together some threads from fabrics that are often kept apart. The threads I would like to weave are, in summary:

1. Unfairness is a perception and a set of feelings often born of broken promises.

2. In the workplace, these promises have to do with (amongst other things) providing a system of work that is safe not only in physical terms, but also in psychosocial terms.

3. The key psychosocial factors are managerial/ supervisory choices about the sharing of information and the authority to make decisions in areas that are of material interest to employees.

4. Lack of material information and deprivation of appropriate participation have been regarded as stressful in recent research. We can
now connect this understanding to another that says the unfairness of these conditions magnifies their stressfulness and their impact on health.

5. Since the perception of unfairness arises from a belief that stressful conditions of the sort reviewed here arise from managerial choices, these choices become the focus of interventions designed to prevent illness and expedite recovery.

6. These choices can be reviewed in the context of the occupational health and safety principle of diligence which, in its broadest proactive sense refers to a duty to abate harms that are predictable and foreseeable.

7. This principle of “constructive” diligence refers - by virtue of the knowledge we now have - to the continuous process of harm reduction that loops from the workplace to the home, health care system, community and back again.

The challenge of the fairness-health connection in the workplace, then, is one of leadership. It is a call for recognition among workplace leaders that their behaviour, their choices produce not only things and services but also health and wellbeing. Not surprisingly, these outcomes are related in that customer/client satisfaction is organically keyed to employee health and satisfaction. (Bowen, Gilliland and Folger 1999)

Having said this it would in itself be unfair and unreasonable to insist that all or even most employers know in the fullest sense that when they choose to use power (as defined in this article) as the basis of their rela-
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The fairness connection

This being the case, a pressing need arises to raise awareness of the power-fairness-health connection among employers. There are various ways of framing the issue but one way that is particularly relevant involves expansion of the province of occupational health and safety to include protection from foreseeable and preventable psychosocial hazards residing in the organization and design of work. There is a significant Canadian example of this expansion: Saskatchewan’s Occupational Health and Safety Act (1993) consciously adopts an expanded view by defining occupational health and safety as (among other things) (i) the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers (ii) the prevention among workers of ill health caused by their working conditions (iii) the protection of workers in their employment from factors adverse to their health (iv) the placing and maintenance of workers in working environments that are adapted to their individual physiological and psychological conditions and (v) the promotion and maintenance of a working environment that is free of harassment (s.2[1]p).

It is worth noting in this context that provinces whose Workers’ Compensation Boards have elected to exclude stress as a compensable disorder may expose employers to employee claims under OHS legislation or private law (tort) where legal standards of foreseeability and causation of harm can be met. An English case (Walker v. Northumberland County Council 1995 1 All E.R. 737 at 749) lays out the potential scenario where the judge noted, “there is no logical reason why risk of psychiatric damage should be excluded from the scope of an employers’ duty of care …”. In this case it was held that “where it was reasonably foreseeable to an employer that an employee might suffer a nervous breakdown because of the stress and pressures of his workload, the employer was under a duty of care, as part of the duty to provide a safe system of work, not to cause the employee psychiatric damage by reason of the volume or character of the work which the employee was required to perform” (Walker at 737). In this same case, the court (addressing what some think of as the “wimp” factor) noted that in spite of his “very considerable re-

What Employers Promise

**Fair treatment**
- Reasonable workload
- Basic courtesy, respect
- Reasonable reward (compared to others in the same situation)

**Clear duties**

**Safe System of Work** (do no harm that is reasonably preventable)
- Physical environment
- Psychosocial environment
serves of character and resilience” what broke the plaintiff was, among other things, “the mounting but quite uncontrollable workload” and “a feeling of frustrated helplessness because he found himself in a deteriorating situation which he was powerless to control” (Walker at 754). Note the unambiguous references to powerlessness, frustration, helplessness and lack of control as stressors in this case.

The knowledge that we now have concerning the likely perception of these conditions of work as unfair, and the compounding effect that this perception has on the health outcomes of stress, simply adds to the probability that health harms arising from disempowerment may be actionable at law. But even if they are not actionable they represent a significant burden to employees, their families and their employers.

While I have argued that confronting these issues is a leadership challenge, there is also a significant role to be played by workplace agents such as OHS professionals and committees, Employee Family Assistance Programs, Human Resources and Wellness staff. In partnership, and with the authorization and active support of management, these groups can address the fairness-health-recovery connection by:

- identifying stress, fairness, health and recovery issues through surveys, re-analysis of existing data from EFAP, WCIB, Human Rights sources
- developing and recommending benchmarks, plans of action and milestones for progress
- developing and proposing the business case for fairness in connection with health, safety and recovery.

In this regard, the Walker case mentioned earlier should stand as a warning beacon for us. In that case the psychiatrically injured employee returned to work once, was exposed to the same if not worse conditions again (after being promised relief) and succumbed once more, this time for good. This is an example of how unfairness at work can produce illness that in the end prevents employees from ever functioning properly again. To this lose-lose situation we can and must find solutions in the form of a fairer workplace.
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Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #2C

THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS:
The case of stress-related disorders

Martin Shain, S.J.D.

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THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS: The case of stress-related disorders

INTRODUCTION

The purpose of this article is to draw attention to a neglected driver of health care cost production and distribution. This driver is the workplace which in some instances can be likened to an inefficient engine producing a smog of social and economic exhaust. Within this exhaust we can discern a high concentration of health care costs that are transferred by the workplace to society at large with neither its knowledge nor its consent. Among such costs are those associated with cardiovascular disease, injuries, infections, substance abuse, anxiety, depression, certain forms of cancer and the many consequences of conflict. Many of these adverse outcomes are in some way potentiated, created or mediated by specific types of work-generated stress. Much attention has been given by researchers to the costs of these stress-related outcomes to the workplace itself in terms of absenteeism, higher insurance claims, lost efficiency and lost productivity (see, for example: Bertera, 1991; Jacobson et al., 1996). These costs are real and not in dispute, although arguably many of them are passed on to consumers of goods and services in the form of higher prices. My emphasis here, however, is different. I wish to consider the stress processes through which the workplace produces health care costs or fails to contain them. I wish then to consider what may be done to address this situation since it is clear that some of these stress-related costs can be prevented and others contained within the workplace if and when certain policies and practices are adopted. These polices and practices involve, on the one hand, governance or management of the workplace and, on the other, provision of programs and services for employees. In what follows, these broad initiatives are referred to as Harm/Cost Abatement and Harm/Cost Containment respectively.

I argue that both types of initiative are required if the workplace is to discharge its presumptive duty to avoid reasonably foreseeable and preventable stress-related harm to employees and to those third parties in society who are affected by their losses. This includes not only significant others and family members but also whole communities and society at large.
The principle that the workplace should do no harm is clearly a value statement and an assumption. Some will argue that it is an unwarranted assumption and that its fair and just for the workplace to produce harm if employees consent to this risk by agreeing to some form of loss commutation such as through higher wages and benefits. But even if it could be argued successfully that these social harms and costs are in some way bargained for freely and with full consent by employees themselves, the fact remains that third parties are affected by these losses who neither consent to them nor are compensated for them. These third parties include, as noted earlier, significant others, family members, communities and taxpayers at large. These observations signal a fundamental debate about the nature of consent and freedom of contract that cannot be argued here (Trebilcock, 1993). I wish simply to declare that I align myself with those who say it is inefficient and wrong for the state to allow its workplaces to create social harms and costs (in this case, health care costs related to job stress) that are both reasonably foreseeable and preventable.

Given this general outline of the argument, it is now necessary to provide the specific building blocks for it, as follows:

1. The risk of some harms is intrinsic to certain kinds of work e.g. policing, mining, forestry, nursing and manufacturing all involve foreseeable risks that arise virtually by definition once we have decided that it is desirable to maintain law and order, extract ore from the ground, fell trees and trim lumber etc. We might add to the list of intrinsic physical risks a set of intrinsic psychosocial risks associated with the nature of the work e.g. certain stresses are expected to be associated with police work: there can be suspense, tension, mental fatigue and sometimes extreme monotony.
THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS:

The case of stress-related disorders

2. However, given the intrinsic nature of work, there remains in most cases a significant band of discretion with regard to its technical and social organization. Choices and decisions made by senior managers concerning ways in which work is to be carried out exert a very important influence on the degree to which physical and psychosocial hazards will arise. Just as choices can produce unsafe places and things, so too they can produce stress risks that place employees in harm’s way. The important point here is that the rate and severity at and with which such hazards occur vary within workplaces performing the same kinds of task. For example, some hospitals are run in such a way that they produce few risks of any kind to employees, while others are run in such a way as to produce every imaginable kind of harm. The same can be said of sawmills, automobile factories, mines and so forth. In short, management choices about the organization of work produce differential amounts of stress-related harm that give rise to differential health related costs (Shain, 1998). This point will be revisited in detail shortly because it lies at the heart of the argument presented here.

3. Once harm has been produced, or the conditions for its production have been created, there are yet further choices with regard to its containment within the workplace. A wide variety of policies and programs are available to contain stress-related harms and costs. These include Health Promotion Programs, Employee (Family) Assistance Programs, Health Benefits Packages, Safety Policies and Programs etc. These containment measures are highly variable in their content, application and effectiveness. However, for purposes of the present argument it is safe to assume that within this variation there are many effective and efficient approaches (Shain et al., 1986).

4. There is probably an inverse relationship between the amount of harm produced by adverse governance practices and the effectiveness of harm containment measures. The rationale for this assertion is based on logic: it becomes increasingly difficult to apply the brakes effectively (harm containment measures) to a vehicle whose engine (governance practice) is increasingly straining against them.
PRODUCTION AND ABATEMENT OF HARM IN THE WORKPLACE

As noted earlier, the crux of the thesis presented here is that management choices are constantly being made about different ways to organize the same kinds of work. Consequently, we see enormous variations in the extent and severity of stress-related harms produced within economic sectors.

Research attention over the last 25 years has increasingly converged on certain key stress risk factors in the organization of work that are associated with the production of a wide range of harms including cardiovascular disease, certain cancers, infections, substance abuse, anxiety and depression, injuries of all kinds and conflict. These stress risk factors are addressed in two prominent models of influences on wellness in the workplace: the Demand/Control Model (Karesek and Theorell, 1990) and the Effort/Reward Imbalance Model (Siegrist, 1996).

The Demand/Control Model asserts that an interaction of two specific job stressors presents a major threat to health. These stressors are High Demand (having too much to do over too long a period with constant, imposed deadlines accompanied by psychological pressure) and Low Control (having too little decision latitude or influence over the day to day organization of one’s own work). These stressors, in combination, are likely to be experienced as psychological and physical strain when they are sustained over long periods of time. Their effects can be aggravated by stress from domestic sources, and indeed there is powerful evidence showing that job stress and home stress reinforce each other.

Numerous studies have shown that exposure to High Demand/Low Control conditions is associated with dramatically higher rates of illnesses and injuries. These will be summarized shortly.
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The case of stress-related disorders

The Effort/Reward Imbalance Model asserts that when, on a chronic basis, effort (the mental or physical energy expended to achieve an organizational goal) exceeds reward (compensation for, or acknowledgement of effort in terms of bestowed status, financial gain, career advancement) a state of strain is likely to be produced which in turn can lead to a variety of adverse health outcomes.

Since the health outcomes attributed to High Effort/Low Reward conditions are very similar to those attributed to High Demand/Low Control conditions they are summarized below together. Increasingly, it seems that both pairs of conditions are likely to co-exist in the same workplaces although not all adverse outcomes are simultaneously observed, given differences in type of work and means of production.

Health Effects of Adverse Working Conditions: Summary

1. High Demand/Low Control conditions at the extreme (highest 25% Demand level, lowest 25% Control level) compared with High Demand/High Control and Low Demand/High Control conditions are associated with:
   - more than double the rate of heart and cardiovascular problems
   - significantly higher rates of anxiety, depression and demoralization
   - significantly higher levels of alcohol and prescription/over the counter drug use
   - significantly higher susceptibility to a wide range of infectious diseases

   (Gardell, 1982; Greenberg and Grunberg, 1995; Johnson et al., 1996; Karasek and Theorell, 1990; Matthews et al., 1987; Theorell et al., 1997)

2. High Effort/Low Reward conditions at the extreme (highest 33% Effort level, lowest 33% Reward level) compared with High Effort/High Reward conditions are associated with:
   - more than triple the rate of cardiovascular problems
   - significantly higher incidence of anxiety, depression and conflict-related problems

   (Bosma et al., 1998; Siegrist, 1996)
3. High Demand/Low Control conditions and High Effort/Low Reward conditions are associated with:
   • higher incidence of back pain (up to 3 times the rates found in High Demand/High Control and High Effort/High Reward conditions)
   • higher incidence of Repetitive Strain Injuries (excess rates of up to 150% have been reported)
     (Polanyi et al., 1997; Shannon et al., 1996; Shannon et al., 1997; Smith, 1997)

4. A combination of High Demand/Low Control and High Effort/Low Reward conditions are implicated, along with other more general workplace stressors in the precipitation of colorectal cancer. People experiencing such adverse conditions had over 5 times the rate of colorectal cancer in one recent well-conducted study.
     (Courtney et al., 1993)

5. There is strong evidence to suggest that many of the adverse health conditions listed above are linked. The processes responsible for the link can be traced often to the functions of the psychoneuroimmunological (PNI) system. (Kiecolt-Glaser and Glaser, 1995). “Mind-body” connections can be found, for example, in the aetiology of infections, cardiovascular diseases, certain types of cancers, injuries and hard-to-diagnose pain. (Cohen et al., 1991; Courtney et al., 1993; Kiecolt-Glaser and Glaser, 1995; Smith, 1997; Steptoe et al., 1997; Theorell et al., 1997; Polanyi et al., 1997; Shannon et al., 1997)
THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS:

The case of stress-related disorders

For purposes of this discussion, the essential point about the relationship between job stress of the kind described above and adverse health outcomes is not so much that it exists but that it is to a significant degree reversible. Numerous studies indicate that when management chooses to find ways of increasing employee control and reward, benefits can be expected in regard to decreased rates of almost all adverse health outcomes of the kind we can measure over relatively short periods of time. These outcomes include reductions in injury rates, absenteeism due to infectious diseases, anxiety, depression and certain types of pain. (Elden, 1986; Gardell, 1982; Greenberg, 1986; Johnson and Johansson, 1991; Kaplan and Rankin, 1993; Macy and Izumi, 1993; Painter and Smith, 1986).

To sustain positive changes of this nature, of course, requires a longstanding commitment to the abatement of conditions of work that give rise to adverse health outcomes. It is crucial, however, that we acknowledge the chosen nature of these conditions. High Demand/Low Control and High Effort/Low Reward conditions do not occur by chance, nor are they wholly determined by the nature of work. Management choices play a crucial role in their genesis and precipitation into adverse health outcomes. It may be useful, therefore, to conceptualize workplaces in terms of their capacity to avoid or abate harm potentially resulting from adverse governance practices. Earlier, it was noted that workplaces performing identical tasks (e.g. hospital & sawmills) vary a great deal with regard to the amount of harm they produce as a result of differences in governance/management practices. These variations can be observed from a number of different perspectives, but an important one is from the viewpoint of employees who, in surveys of job stress within economic sectors describe highly variable rates of concern about High Demand/Low Control and High Effort/Low Reward conditions. It is highly unlikely that such differences in perception stem from personality or class differences since these variations occur within economic sectors and therefore control for major differences in such background factors as reflected in occupational status.
CONTAINMENT OF HARM IN THE WORKPLACE

While the first line of defence against stress-related harm in the workplace is the abatement of conditions leading to it, a second line of defence is the panoply of programs and services that employers can use to manage and contain the consequences of harm once they have occurred. These consequences range from the mild, as in overall deterioration of physical fitness and gaining excess weight, to the severe, as in heart attacks and serious injuries. However, mild consequences may become severe, so the object of many Health Promotion Programs is to prevent the eventuation of early risk factors such as low activity and being overweight into full-blown disorders such as heart disease and stroke. An important class of workplace interventions - Employee Assistance Programs - addresses, among other needs, the mental health of employees as reflected in bouts of anxiety, depression, relationship problems and so forth. As noted earlier, the relationship between mind and body is such that early attention to mental health problems might be expected to play a preventive role with regard to a variety of physical health problems in addition to being important in its own right.

For a review of the extensive literature on Health Promotion and Employee Assistance Programs readers may wish to consult in particular the last five years’ issues of The American Journal of Health Promotion and Employee Assistance Quarterly.

In concert with the provision of Health Promotion and Employee Assistance Programs most if not all larger employers offer a wide range of health benefits to their employees including coverage of drug claims, paramedical services and semi-private or private hospital accommodation. There are many variations on these themes. A common factor is some form of insurance purchased by the employer to control the costs associated with these benefits. Sometimes, larger companies choose to self-insure which tends to keep cost management within the corporate envelope. However, there is always a concern about demand management in that the cost of premiums or their self-insured equivalents are affected by claims experience. The higher the usage of benefits packages the more likely it is that premiums will go up or employees will be asked to pay a larger percentage of them.
THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS:

The case of stress-related disorders

The essential point about harm containment measures of the kind outlined above is that they play a key role in the distribution of health care costs between the workplace (which includes both private and public employers) and society at large (which includes individuals as consumers of health care and as taxpayers). In other words, the effectiveness of these harm containment measures influences the degree to which health costs generated within the workplace by adverse governance practices are transferred to society at large. It is, of course, possible to argue that harm and cost can be transferred in the opposite direction i.e. employees may bring to work with them a variety of adverse predispositions and conditions that can be shown to affect productivity and efficiency in a negative manner. While this is a reality, my intention in this article is to underscore the importance of the workplace in either aggravating these adverse employee predispositions and conditions or, if not ameliorating them, not making them worse. This approach is based simply on the value assumption noted earlier that the workplace should do no harm. In effect, this principle translates as the requirement to avoid placing employees in the way of reasonably foreseeable and preventable harms resulting from choices about the organization and design of work (Shain, 1998).

Much depends, therefore, on the effectiveness of containment measures within the workplace with regard to how much cost/harm is ultimately transferred to society at large.

At this point, then, it may be useful to introduce the concepts of Containment Effectiveness and Containment Efficiency. These may be considered measures of the degree to which workplaces are successful in keeping the health costs that they generate within the corporate envelope. Clearly, there is enormous variation in Containment Effectiveness and Efficiency within the workplace. Reports of the effectiveness and efficiency of Health Promotion and Employee Assistance Programs, for example, abound (see American Journal of Health Promotion, Employee Assistance Quarterly). The net conclusion of evaluation studies conducted on these interventions is that while they can be and are effective and efficient in some instances, they are frequently not so. Much depends on the commitment of senior management to the successful implementation of such programs and this key element is often found to be missing.
ABATING AND CONTAINING HARM AND COST: SOME SCENARIOS

We are now in a position to conceptualize workplaces in terms of their commitment and capacity to abate and contain the health harms and costs associated with adverse governance practices resulting in stressful High Demand/Low Control and High Effort/Low Reward conditions. The figure below illustrates the typology of workplaces that emerges when commitment to abate harm and costs is related to containment effectiveness/efficiency.

Abatement and Containment of Health Harms and Cost

This figure suggests that when there is high commitment to the abatement of harms associated with adverse governance practices coupled with high containment effectiveness/efficiency the transfer of health related costs to society is at a minimum. Conversely, when there is low commitment to the abatement of harms associated with adverse governance practices coupled with low containment effectiveness/efficiency the transfer of health related...
THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS:
The case of stress-related disorders

costs to society is at a maximum.

Based on survey information (Health Canada, 1998), we know that the percentage of employees within a given economic sector falling into the upper and lower extremes of High Demand/Low Control, High Effort/Low Reward can vary between 15% and 30%. In other words, the size of the “at risk” employee population can vary by as much as 100% within a single economic sector. Within the same economic sector we observe further that referral rates to Employee Assistance Programs, where available, range between 5% and 10% of the workforce. Transposing these data into the typology shown in Figure 1, we can see that there is the potential for the following extreme scenarios to emerge.

A. A large population at risk (30%) with a low referral rate to the EAP (5%).
B. A smaller population at risk (15%) with a high referral rate to the EAP (10%).

In the first instance (“A”), we observe a program penetration ratio of 1:6 while in the second instance (“B”), we observe a program penetration ratio of 2:3. The differentials between the size of the referred and at risk populations in these examples provide initial indicators of the health cost burden transfers in each instance. However, the actual cost transfer depends both on the degree to which severity of risk can be equated between the two employee populations and on the degree to which the EAP is in each case effective. As suggested earlier, the effectiveness of an EAP may vary inversely with the degree to which adverse management/governance practices drive employees to seek help. The reason for this is that EAPs operating in adverse workplace governance contexts are forced to return “recovered” employees into psychotoxic environments that may wash out the benefits of assistance.
Assuming for the sake of argument that severity of problems and effectiveness of intervention in the two instances cited above can be roughly equated, we can readily deduce that in the first case, A, there is a considerable “escape” of costs to society. Indeed, in that case - assuming no other form of workplace intervention is tried - 5/6ths of the costs associated with adverse governance practices are not contained in the workplace and are potentially transferred to society. In the second case, B, there is far less escape of costs to society. In that case, under the same assumptions as in case A, only 1/3rd of the health costs associated with adverse governance practices are not contained in the workplace. Workplace B is about 4 times more efficient at containing health harms and costs than workplace A, assuming that no other containment mechanisms are involved in either case or that other such mechanisms are comparable. For example, rather than seeking help through their EAPs some employees may choose to consult their own doctors or other helping professionals for stress or stress-related disorders. They may alternatively do nothing (a common practice) or try various forms of self-help. Some of the costs of these non-EAP courses of action may find their way back to the workplace. For example, if a private physician prescribes an anxiolytic or anti-depressant medication, the cost of this may be born by the employer’s
THE ROLE OF THE WORKPLACE IN THE PRODUCTION AND CONTAINMENT OF HEALTH COSTS:
The case of stress-related disorders
insurer.

CONCLUSION AND POLICY IMPLICATIONS

Employment relationships generate stress-related health care costs that are born partly by the workplace and partly by society at large. The distribution of such costs between the workplace and society depends on the governance practices of specific employers with regard to stress risk abatement and on the policies and programs they have in place to contain stress-related harm.

The policy implications of this conclusion point to the need for society to declare as a matter of principle that a floor standard for workplace governance be established. This floor standard would enunciate the view that employees require for their mental and physical health working conditions characterized by reasonable levels of participation in the organization of their own work. To be meaningful, participation calls for the opportunity for employees to be involved in all decisions that have a material impact on their lives. The level of involvement in decisions should be consultative - that is, it should go beyond the simple solicitation of employee input to include substantive discussion of alternative courses of action even though the fiat remains with management. However, consultation and input are sterile indeed if they are not supported by timely information from the employer regarding the substance of decisions that need to be made. These proposals are by no means utopian: in Norway and Sweden as well as in Germany they have been incorporated - albeit in different ways - into employment legislation so that participation has become an employment standard in those countries (Shain, 1992). As with any standards there are gaps between them and practice, but they are supported by administrative infrastructures that seek to close these gaps. Without such standards the state is totally reliant upon the goodwill of employers to move toward more participative governance practices. If for no other reason, we should move in the direction of standards for participation because the health
related costs of not doing so are clearly substantial.

The building blocks of meaningful employee participation - opportunity, consultation and timely information - are necessary and probably sufficient to address the fundamental needs of employees to exercise reasonable control over the organization of their work and to feel acknowledged and appreciated for their efforts in pursuit of organizational goals. However, there will continue to be residual stress-related casualties in the workplace even when serious efforts to abate stress at its source by increasing control and reward have been implemented. This fact points to an ongoing need to maintain harm and cost containment measures such as Health Promotion and Employee Assistance Policies and Programs. The role of these interventions in the context of well implemented stress risk abatement policies and practices is primarily to help employees help themselves i.e. to support the capacities of individual employees to cope with stress and to look after themselves. When workplaces adopt the axiom of doing no harm they reduce the need for such support programs to work against the tide of psychotoxicity raised by adverse management practices.

In summary, a comprehensive approach to health promotion, stress reduction and limitation of health cost transference from the workplace to society at large calls for a two-pronged strategy characterized by harm abatement on the one hand and harm containment on the other. At a minimum, it would seem fair for society to insist that workplaces do no harm in a broader sense than is implied by the current occupational health and safety legislation in most jurisdictions. Consequently, society should give priority to policies that encourage and require workplaces to do no harm (harm abatement) while supporting and possibly offering incentives for preventive and remedial programs such as Health Promotion and Employee Assistance (harm containment).
References


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Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #3

The Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness

Notes and Commentary on selected studies
Shehadeh and Shain (1990)
Maes, Verhoeven, Kittel and Scholten (1998)
Shehadeh and Shain (1990)

INFLUENCES ON WELLNESS IN THE WORKPLACE:
A multivariate study
Technical report

Health & Welfare Canada

A review & Commentary
The Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness

INFLUENCES ON WELLNESS IN THE WORKPLACE: A multivariate study

GENERAL MODEL OF INFLUENCES ON WELLNESS: EXPLANATION

Results of the Health Canada Studies

The Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness

INFLUENCES ON WELLNESS IN THE WORKPLACE: A multivariate study

GENERAL MODEL OF INFLUENCES ON WELLNESS: EXPLANATION

The results described here are based on surveys among 1,970 men and women in two worksites using the Workplace Health System questionnaire developed by Health Canada.

The analysis employed a technique that simultaneously models the effects of all the variables on one another. ("Structural Equation Modelling")

This is a condensed and simplified version of the Model.

Main Points:

1. Home Stress and Job Stress in this model refer to accumulated stresses from many sources: it is the additive effect of all of them that concerns us here.

2. Job Stress in this model contains, but is not limited to elements of both Demand/Control and Effort/Reward Imbalance – type stressors.

3. Home Stress and Job Stress “feed off” and reinforce each other, the one making the other worse.
4. Home Stress and Job Stress affect Wellness (which means self-reported health status) by two related mechanisms.
   a. By defeating employees’ sense of control over work and their health which in turn reduces motivation to pursue positive health practices. (i.e. a psychological mechanism)
   b. By making it difficult for employees to maintain a healthy lifestyle and pursue positive health practices. (i.e. a practical mechanism)

5. Personal Health Practices in this model refer to:
   - exercising
   - eating
   - smoking
   - sleeping
   - drinking alcohol

6. We know that Wellness (self-perceived health status) is a good predictor of many specific outcomes including
   - susceptibility to infection
   - depression, anxiety
   - tendency to overuse mood altering, analgesic and sleep inducing medications.
Maes, Verhoeven, Kittel and Scholten (1998)

Effects of a Dutch Work-Site Wellness – Health Program: the “Brabantia” Project.

American Journal of Public Health 88,7,1037-1041

A review & Commentary
The Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness


This is an evaluation of an intervention designed to influence both personal health practices and organization of work in a Dutch manufacturing company. It is a novel project in that it takes this two-pronged approach and that it is based on a “quasi-experimental” methodology where the “test” site, in which the intervention is being tried, is compared to another similar “comparison” site in the same company in which no formal intervention is being attempted.

In this case, the organization of work interventions (OWIs) were intended to support individuals in their efforts to improve their overall wellbeing. OWIs focussed on job enlargement and enrichment, including the all important issues of autonomy or control over work, the sufficiency and timeliness of information provided to employees and frequency/quality of social support. Personal health practice interventions (PHPIs) were fairly comprehensive but low in intensity, including exercise regimens self-selected from a video menu, nutritional education, stress management, substance abuse prevention, smoking cessation, back care etc. During the three year course of the project, employee participation in the design and delivery of these programs became more pronounced. However, it is significant that these PHPIs were introduced a whole year in advance of the OWIs. It could be argued that this is the reverse of what would be most effective. Nevertheless, some “environmental” supports were introduced almost immediately in the form of improvements to the healthiness of food served in the cafeteria, creation of on-site fitness facilities, non-smoking policies and various kinds of advertising for the interventions.
The Joint Impact of Personal Health Practices and Organization of Work on Health, Productivity, Efficiency and Competitiveness


But the authors admit that, by North American standards, the level of resources committed to the lifestyle component was relatively modest. This may explain the unimpressive impact of the project on lifestyle variables such as cardiovascular fitness. One significant change observed at the first post-test, a decrease in cholesterol levels, disappeared by the second post-test. The major impact of the project appears to have been in the area of increased job control and decreased absenteeism both of which were greater among the experimental group than among the comparisons.

The authors conclude that both types of intervention (OWIs and PHPIs) are needed to achieve comprehensive and sustainable effects. As observers, we might add that the order in which the two forms of intervention are introduced is of great significance since the one (OWIs) logically paves the way for the other (PHPIs). Given the reverse order in which the interventions were developed and delivered in this project, we might hazard a guess that the OWIs introduced some stresses and strains of their own in the short run that could have been dealt with had the PHPIs been directed specifically at supporting people in their efforts to cope with them.

The Brabantia Project is well worth studying, however, because it is virtually unique in the published literature as an attempt to address both organization of work and personal health practices as interacting influences on health and productivity.
Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #4
‘COSTS OF DOING SOMETHING’

A List of References

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Note: key articles are in bold type


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the organization? American Journal of Health Promotion, 14 (1), iv.


‘COSTS OF DOING SOMETHING’

List of References

January 3, 2001

Note: key articles are in bold type


Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #5

ORGANIZATION OF WORK INTERVENTIONS AND HEALTH OUTCOMES

Notes and Commentary on selected studies
Gonzalez (1999)
Macy and Izumi (1993)
Polanyi et al. (1998)
Maria Gonzalez (1999)

‘Shifting the performance curve’

Ivey business journal, July/August

A review & Commentary

Martin Shain S.J.D
ORGANIZATION OF WORK INTERVENTIONS AND HEALTH OUTCOMES

‘Shifting the performance curve’

Maria Gonzalez describes “Shifting the Performance Curve” which is a strategy for enhancing the performance of the Bank of Montreal based on learnings from studies of best practices found among the clients of the bank itself and of consultant firms. The strategy is an integrated approach in which an intimate connection is seen between performance, a healthy organizational climate, managerial effectiveness and employee commitment. In fact, performance is seen as being determined by the other three factors. For sustainable performance gains, simultaneous attention has to be paid to organizational health climate, managerial effectiveness and employee commitment. The Bank has developed indicators for each of these domains.

Key to the Organizational Health Climate Index are questions about the perception that one’s worth is important* and having opportunities to do what one does best*. Key to the Managerial Effectiveness Index are questions about personal effectiveness, emotional intelligence and people management processes because, “it is the manager who has the greatest impact on organizational climate since he or she significantly influences each element in the climate” (at pg. 21).

This vital connection between management practices and employee mental health (as indicated by the Organizational Health Climate Index) resonates with the received wisdom of an increasingly significant body of researchers and practitioners who see this link as the engine of performance.

Consumer satisfaction is also measured routinely since ultimately this is a “hard marker” of performance particularly when consumers include shareholders.

However, as Macy and Izumi pointed out in their 1993 meta-analysis of 131 field studies, Gonzalez underlines the time lag that can exist between the point where financial performance increases and employee satisfaction catches up. There is a warning in this, because as Gonzalez says, “excelling in any key performance lever at the expense of another would prevent it from achieving sustainable results” (at pg. 19, emphasis added).

Leadership is a key integrating factor in “shifting the performance curve”. Progress on indicators is “measured quarterly and reported to the CEO by each Vice-Chairman at the same time as the Banking Group’s financial results” (at pg. 19). By these means, the impact of human factors on performance is unlikely to be forgotten.

* These questions appear to tap two domains of employee satisfaction that are critical in offsetting the effects of stress. These domains are “reward” in psychological terms, and “control” over the nature of one’s work. The Bank’s application of these concepts is highly pragmatic but one can see two of the elements in the Demand/Control, Effort/Reward model discussed in the framework document.
Barry A Macy and Hiroaki Izumi (1993)


A review & Commentary

Martin Shain S.J.D
ORGANIZATION OF WORK INTERVENTIONS AND HEALTH OUTCOMES


Macy and Izumi (1993) did a “meta-analysis” of 131 field studies of interventions carried out in the workplace with the object of producing positive financial, behavioural and attitudinal outcomes.

They looked at studies conducted over a 30 year period and found 1,800 of them. They narrowed the number down by imposing certain criteria on the methodology of the studies. In particular, they said the studies would have to be at least quasi-experimental – i.e. would have to involve a comparison or control group – to warrant inclusion.

To compare the 131 studies the investigators had to use an analytic tool called “d–effect statistic”. This statistic compares and aggregates observed differences between experimental and comparison/control sites before and after planned attempts to bring about changes in financial, behavioural and attitudinal outcomes. The d-effect statistic is well known to scientists who need to compare studies that use different methods and use different types of measurement. Although it has its own methodological drawbacks, the use of the d-effect statistic allows us to get a general idea of trends in studies that otherwise could not be compared with one another at all. The usual range for this statistic is zero to one (0-1) where 0.75 is considered a large effect and anything over 1.0 is considered very large.

The authors looked at the various “action-levers” that were used to implement change in the various studies and classified them as follows:

1. **Structural Design** action-levers are those intended to influence the organization’s power and control systems.
2. **Human Resource** action-levers are those designed to influence the way people are viewed, or view themselves and their jobs and the ways in which people do their jobs.
3. **Technological** action-levers refer to management information systems, processing and manufacturing systems in all their technical aspects, delivery systems, communication (e-mail, internet etc).

A fourth class of action-lever associated with Total Quality Management
ORGANIZATION OF WORK INTERVENTIONS AND HEALTH OUTCOMES


(TQM) was not included because of severe methodological weaknesses in the studies available at the time. (Currently, a very important development of TQM with increased methodological rigour can be found in Service Profit Chain research which integrates measures of relationship between customer/supplier/ employer/employee satisfaction and behaviour indicators.)

The results of this huge meta-analysis are intriguing. They show that

1. Financial benefits of a very large nature (mean d-effect = 1.23) can be achieved by interventions that simultaneously incorporate structural, human resource and technological components.

2. Behavioural gains of a large nature (mean d-effect = 0.89) can also be achieved through the use of the same three leverage points that generate very large financial returns. These gains refer to reductions in turnover, absenteeism, accidents/injuries, recorded illnesses, grievances, objective role stress, dismissals, work stoppages, psychosomatic complaints.

3. Attitudinal gains of a small nature usually accompanied these financial and behavioural gains. This area involves various measures of job satisfaction and perceptions of the work environment. However, an exception to this trend is observed when two of the three classes of action-lever are deployed – namely, structural and human resources together but without technological levers. Here, the d-effect for attitudinal change is 0.76 (Table 9 in Macy and Izumi). Although in this case the financial gain is less (0.87) it is still large according to the conventions used in this meta-analysis. Thus, there is the appearance of a trade-off between financial and attitudinal gains. This result must be approached with caution, but it is tempting to speculate that structural and human resource changes introduced in the absence of technological innovations, or perhaps prior to them, produce greater gains in the attitudinal area than “three point” interventions where technological changes come with the others. There is an intuitive appeal to this. One of the greatest complaints that one hears about the nature and pace of change is that new technology is introduced so often without con-
resulting those who are likely to be most affected by it. If, then, pains are taken to ensure that “power and control” issues (usually involving redistribution) are dealt with as a first priority in change efforts, supported then by H.R. measures to train and educate people in new ways of dealing with one another, we can see that a solid basis can be established for talking about the introduction of new technology. The fact remains, however, that more financial gain is obtained when technological change is introduced at the same time as structural and human resource changes. The question that remains is, are these financial gains sustainable in the absence of supportive employee attitudes? Macy and Izumi themselves speculate that there may be a “lead – lag” time between actual financial performance results and changed employee attitudes (at pg. 280). One of the problems with the meta-analysis reported by Macy and Izumi is that the authors were unable to find much discussion of what they call “moderator” variables in the published studies. These would include variables such as trust and a sense of fairness, and are expected to exert a “profound” effect on the success of change / transformation efforts (at pg. 293). The only hint we get of how important such variables might be is in the form of a 0.39 correlation (not a d-effect) between “group attitudes” (a subdimension of job satisfaction) and “structured performance appraisal feedback”, an approach to H.R. management often associated with perceptions of procedural fairness.

Macy and Izumi themselves appear to believe that there is a critical order in which changes should be implemented if employee attitudes are to be significantly influenced. And they imply that employee attitudes must be influenced eventually if positive changes in other performance outcomes are to be sustainable. They say at pg. 288, “It becomes evident that the first action lever implemented in transformation efforts must deal directly with power, control and decision-making issues”.

Investing in Comprehensive Workplace Health Promotion
Michael Polanyi, Joan Eakin, John Frank, Harry Shannon and Terry Sullivan (1998)

‘Creating Healthier Work Environments: a critical review of health enhancing organizational changes at various companies.’


A review & Commentary

Martin Shain S.J.D
ORGANIZATION OF WORK INTERVENTIONS
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‘Creating Healthier Work Environments: a critical review of health enhancing organizational changes at various companies.’

Polanyi and colleagues found eleven studies about the impact of planned work organization changes on health outcomes that met their criteria for scientific rigour. The basic criteria were that the studies had to have an experimental quality to them involving comparisons of intervention sites with non-intervention sites at two or more points in time.

The studies located were done between 1975 and 1995. All involved attempts to modify interpersonal relations, task requirements or organizational structures within the experimental worksites. The authors reviewed the eleven studies with particular regard to health and safety outcomes.

Common to most of the eleven studies were efforts to improve the degree to which employees were involved or participated in the organization and design of their own work. The overall conclusion was that interventions directed at modifying the organization of work, particularly through increased participation, had a largely indifferent impact on health outcomes as measured in those studies. The reviewers made several suggestions as to why the results were so lacklustre.

1. There are active strains associated with increased participation. Increased control over work may invite extra responsibility which increases perceived and actual demand or required effort.

2. Surprisingly often, top management and union support were not present. It had either not been solicited or it had not been obtained.

3. The desire to be involved in organizing one’s own work may be a higher order need that cannot be met until more basic needs for things like security and equitable pay are met.

4. Some people may not be suited to the stresses and strains of participation and will typically elect to be told what to do and when to do it.

5. It is extremely difficult to attain anything like the degree of control over workplace interventions required to make definitive statements.
ORGANIZATION OF WORK INTERVENTIONS
AND HEALTH OUTCOMES

‘Creating Healthier Work Environments: a critical review of health enhancing organizational changes at various companies.’

concerning their effectiveness. Management and production method changes often occur in the middle of planned experiments, confounding the results.

6. Sometimes studies do not go on long enough to demonstrate the frequently delayed or “lagged” effects of work organization changes on mental health. Employee satisfaction and mental health are related but by no means synonymous and improvements in the former are often much easier to attain than improvements in the latter.

7. Absenteeism is a poor proxy for health. When it is used as such it produces odd results. For example, employees under very high stress may be afraid to take time off even though they need to. When stress is reduced, fear may recede and absenteeism may increase. However, the relationship between health and absenteeism is likely to be highly dependent on specific organizational conditions and contexts.

8. Sometimes employees seem positive about changes even though researchers cannot figure out why. This points to a potential problem with measurement. Are we tapping the right dimensions of employee satisfaction and health? [Elsewhere in “Investing in Comprehensive Workplace Health Promotion” (Companion Pieces 2a, 2b particularly) we have suggested that “fairness” is a key link between working conditions and mental/physical health. But fairness is rarely measured in the kinds of study reviewed by Polanyi and his colleagues].
Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #6
INVESTING IN A HEALTHY WORKPLACE
The Business Case for a Healthy Workplace
Danielle Pratt BSR, MBA
October, 2000
INVESTING IN A HEALTHY WORKPLACE

The Business Case for a Healthy Workplace

Danielle Pratt, BSR, MBA
President, Healthy Business Inc.
www.HealthyScorecard.com

When Sears Roebuck proved that they earned $200 Million extra in 1997 as a result of improving employee satisfaction by 4%, they paved the way for us to capture the true costs of poor wellbeing.

Does Health pay?
One of the major challenges in pursuing a healthier workplace is to provide a compelling business case for change. True, there will always be stellar organizations and leaders who invest in health on humanitarian grounds. But even this is a risky proposition. What happens when the supportive CEO leaves? For health to be widely embraced in the business community as a strategic business imperative, we need to step up to the plate with some numbers.

Fortunately the numbers are on our side.

Firstly, we can capture direct costs such as Worker’s Compensation, Disability costs, and drug costs. And we can include indirect costs such as the cost of equipment damage or replacement labour, to develop our argument that “Good health is good business”. For example, City of Calgary incurs a tab for indirect costs of $300,000 if a garbage truck is damaged and needs replacing, and the Department of National Defence suffers a $30 Million dollar tab for indirect costs alone, if a fighter jet crashes.1, 2

The Balanced Scorecard: Capturing the Underside of the Health Cost Iceberg
But there is a new, more potent way to measure the costs of poor employee health, and these are the opportunity costs of lost innovation, quality, and productivity. Leading organizations around the world are now using the Balanced Scorecard to capture the leading indicators of future financial performance. In fact, Bain & Company reports that over 50% of Fortune 500 and Global 1,000 corporations have implemented a Balanced Scorecard.3
At the cutting edge of practice, winning organizations in the private and public sector are developing cause-and-effect Balanced Scorecards which can predict the impact of leadership on employee wellbeing and capability, customer results, and financial results.

The investment community, a powerbroker in influencing business practice, is also becoming keenly interested in human capital. For example, the Council of Institutional Investors, which manages over one $Trillion in stocks has been giving close attention to how companies treat their employees. And in a study by Ernst & Young entitled, Measures that Matter, researchers found that 35% of the valuation decision is based on nonfinancial factors. In other words, investment performance goes up and risk goes down when we better understand that human capital is a key driver – maybe THE key driver – of financial performance. And employee wellbeing is at the heart of human capital.

So let’s take a look at why human capital is becoming so hot.

Raising the Bar on Performance: Top Box Results

“Increasing mean satisfaction is strategically different than increasing the percentage of delighted customers and employees.”

Steve Kirn
Vice President, Innovation and Organization Effectiveness
Sears Roebuck

But first, we need to understand why superior performance is so important.

Like it or not, it matters whether your employees and customers are merely satisfied, delighted, or committed. But where is the threshold where it matters the most?

Does your organization know where performance improvements make the most difference? Is the magical threshold between the 4’s and 5’s on a scale of 5? Is it between the 6’s and 7’s on a scale of 7?

Organizations such as Sears Roebuck, Xerox, and the City of Calgary, and Celestica are learning what this Maginot Line is. And they are precisely calibrating their performance targets to reflect just how outstanding they need to be.
INVESTING IN A HEALTHY WORKPLACE

The Business Case for a Healthy Workplace

The new reality is that it can spell disaster for public and private sector organizations to pursue a melting pot of “Mean Satisfieds” or “Aggregate Satisfieds. Even scarier, it can be fruitless to pursue very good results, when only the exceptional results count.

Top box results provide more useful improvement information than a mean or aggregate satisfaction score. They provide a common focus for recognition, and support managers in recognizing and rewarding truly top performers. Most importantly, top box results are the engine of superior and meaningful customer and financial results.

The Gallup Organization’s research on over a million employees, and 80,000 high performance managers, supports the importance of top box results. In fact, the wording of their “Twelve Statements for Employees” – truisms which are correlated with: productivity; profit; employee retention; and customer satisfaction – are intentionally worded in extremes, to ensure that only the very satisfied and productive workers will give a “Strongly Agree” rating.

There are many examples of organizations which embrace top-box customer results. Xerox, for example, found that customers who gave them a “Very Satisfied” rating were 6x more likely to repurchase equipment than those who merely gave a “Satisfied” rating. Calgary Transit, found that riders rating overall service as “Excellent” or “Good” were substantially more committed to continued use of Transit, than those giving lower ratings.
A Perfect 10
Sears Roebuck is targeting perfect 10’s.

Sears has found that their biggest drop-off in customer loyalty behaviour is between the 10’s on a scale of 10, and the 9’s.

Specifically, they have found that among customers who give a 10 out of 10 on “Overall Satisfaction”, 82% “Definitely Would Recommend” Sears to their friends. There is a dizzying drop when customers give a very respectable 9 out of 10: only 33% “Definitely Would Recommend” Sears to their friends!

This stomach-churning drop tells Sears executives that (supposedly) superior satisfaction results at the level of 9 out of 10 generate only mediocre customer results. To reap the benefits of customer loyalty, Sears must WOW their customers with 10’s on a scale of 10.

The research on customer loyalty is well documented. A classic example comes from Frederick Reicheld, whose study on customer defection habits appeared in 1993 in the Journal of Retail Banking. In a review of customers who had defected from another financial institution, Reicheld found that 90% of defectors had been “Satisfied” with their original provider!

It’s not much of a leap to conclude that superior customer results demand superior employee results. In fact, this is more an exercise in logic than empiricism. And this is where health comes in.
Sustainable High Performance

“What distinguished the unusually successful companies from their competitors was a measurable advantage in customer and employee loyalty. Each time we found a performance record that was hard to square with the traditional economics taught in business schools, we also found a company with superior loyalty… that was delivering superior value to its customers and employees, and at the same time delivering inexplicably strong cash flows…”


And then in the balance we find organizations which take a multistakeholder approach to business success. These organizations judiciously balance the needs of employees and customers – and in doing so create the conditions for truly sustainable high performance. Leaders in these workplaces recognize that employee and customer results are not an either/or proposition ... and that employee and customer satisfaction feed off each other. So they climb both ladders of customer delight, and employee capability/delight.
The Satisfaction Mirror

“Rocket science is not required to explain the satisfaction mirror.”


In their luminous book *The Service Profit Chain*, James Heskett, Leonard Schlesinger, and Earl Sasser write about the “Satisfaction Mirror”, the powerful synergy between employer and customer satisfaction. Their well-documented research captures not only the spiral of good will which arises from satisfied customers and employees, but also the economies gained when satisfied employees serve satisfied and loyal customers. This team’s work elegantly captures how improved customer satisfaction yields the “golden nugget” of customer complaints. As customers become more satisfied, they become more comfortable making complaints. This in turn reveals untapped opportunities for superior performance.
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Strategic Health Focus: The Missing Rungs

The problem is that any serious pursuit of top-box employee results requires that leaders understand what motivates – and hinders - human performance. And this inevitably leads us to the drivers of employee wellbeing.

*Organizations truly serious about top box employee results, must understand what drives stress, illness, and injury.*

With the best of intentions, many leaders go astray here.

Wellbeing Programs: Comprehensive but not Strategic

One of the ways leaders fall off the ladder is by delegating employee wellbeing to technical professionals. This arms-length relationship with wellbeing often results in a dizzying array of wellness programs, such as smoking cessation, physical fitness, flexible work options, financial planning, eldercare... even leadership development, the list goes on. A quick browse through *Fast Company* or the *Report on Business*’ “35 Best Companies to Work for”, or *Fortune’s* “100 Best” companies gives us a taste of these hot offerings.

To be fair, these programs are often quite comprehensive, covering the spectrum from:

- *Prevention to management of stress/illness/injury*;
- *On-the-job risk management and off-the-job*;
- *Employee and family services*;
- *Worker’s Compensation, Short-term Disability, and Long-term disability management and return-to-work*.

What is typically missing is the cultural “glue”, the deeply held values, the metrics and the alignment to hold these programs together. If the road gets rocky, and times get tough, these valuable programs are the first to get the axe.
Interestingly, the Gallup organization presents convincing evidence that the 100-Best criteria miss the mark.

As Buckingham and Coffman note in their Gallup bestseller, “First, Break all the Rules”,
“...if your relationship with your manager is fractured, then no amount of in-chair massaging or company-sponsored dog-walking will persuade you to stay and perform.”

Gallup’s new definition of a healthy and productive workplace focuses on internal service quality and leadership, most notably the caliber of the immediate manager.

The Inspired Leader: Strategic Health Focus

Spectacular turnarounds in employee wellbeing can be achieved when an inspired leader takes the helm. Witness the ten-fold reduction in lost time injuries between 1990 and 1993, and the 25-fold reduction in lost-time days, when Ted Pattenden took the helm at NRI Industries in Ontario, Canada. Or the 56% reduction in Medical Incidences Reportable between 1997 and 1999 at MacMillan Bloedel’s Solid Wood Group, when Tom Stephens, acclaimed turnaround artiste, became CEO.

When it comes to health and safety, passionate leaders get things done. In commenting on his turnaround at NRI, president, Ted Pattenden noted,

“This was not an issue of throwing money at (health and safety), this was an issue of throwing management intensity at it.”
Ted Pattenden, CEO, NRI
Presentation to Industrial Accident Prevention Association Conference 2,000
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Leaders that are passionate about employee wellbeing, health, and safety allocate budgets, define accountabilities, and put health and safety high on the executive agenda. When Tom Stephens took the helm at the former MacMillan Bloedel (now Weyerhaeuser), he made safety a top priority. He seconded employees from front-line jobs and created safety “SWAT-teams” which combed the organization for safety improvements.

At MacMillan Bloedel’s 1998 Annual General Meeting, he proclaimed, “...we have declared war on accidents in our workplace... We can best demonstrate our commitment to our employees by sending them home to their family healthy and whole. A safe place to work is a right that belongs to everyone and it must always be our first priority."

And he got results.

But what happens when the enlightened leader leaves? Will the whole house of cards collapse? Far too often, it does.

The Sustainable Strategic Health Focus

The organizations at the forefront of health and high performance are the ones which build staying power for health and safety values. While short-term results from a CEO are exciting, the true measure of a leader’s success is whether health and safety improvements are sustained after the CEO’s departure.

Until we build a living business case – and lock health values into the fabric of our workplaces, we run the very real risk that wellness is simply a “flavor of the CEO”.

Small consolation when we’re dealing with a declining average CEO tenure. For example, the average tenure of Fortune 100 CEO’s is 3.5 years, when you factor out the 18% of CEO’s with tenure over ten years.
In the groundbreaking book “Built to Last”, authors James Collins and Jerry Porras test our assumptions that enduring organizational success depends on flashy leadership. If anything, the reverse appears to be true. In the companies with staying power, the organization is clearly greater than its leaders. In fact, many of the organizations featured in Built to Last are characterized by plodding leaders, and decidedly unsexy (but robust) management systems. Clearly leadership fortitude is required to set up these management systems in the first place. But once health and safety are built into the organization, we are less affected by leadership churn.

The Strategic Gap

Most organizations however still delegate health and safety to technical professionals. Fact is, most managers are unaware of the mountain of evidence that leadership has everything to do with superior health and safety results. And this lack of awareness prevents us from capturing the powerful upstream drivers of stress, illness, and injury. Even when workplaces recognize the health/leadership linkage, many do not provide the necessary management rigor to “lock in” health and safety values… through robust measures, accountabilities, and systems.

At the same time, there is a War for Talent, and a major strategic gap which prevents organizations from achieving acceptable business results. Dr. Kaplan, co-author of The Balanced Scorecard commented at a recent International Quality and Productivity Centre conference on human resources measurement that,

“92% of organizations do not report on leading indicators, and 75% of organizations do not link managers’ incentives to strategy.”
Dr. Robert Kaplan,
Presentation to Balanced Scorecard for Government conference Washington D.C., 2,000

Not surprisingly, the biggest gap in strategy is in addressing the “soft” side of the organization – people.
INVESTING IN A HEALTHY WORKPLACE

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The Balanced Scorecard: Getting Strategic Health Focus on the Executive Radar Screen

The Balanced Scorecard is an exceptionally powerful mechanism with which to position health and safety. And it moves the vital discussion of health strategy to the executive office, where it is so needed. Since the intent of the Balanced Scorecard is to paint a strategic picture of cause and effect, we must show how health links with financial results.

In fact, Health and Safety can add significant credibility to a Balanced Scorecard. For there is a potential and significant flaw in the way many Balanced Scorecards (BSC’s) are crafted. And this flaw leads to complacency that human performance issues have been sufficiently dealt with. This flaw arises from the traditional top-down construction of BSC objectives, which tends to provide a customer-centric view of success. Leaders are encouraged to identify their vision and strategy, to pinpoint the financial and customer results they need to achieve to fulfill their vision… and then to identify the Internal Processes they need to excel at, in order to deliver said Financial and Customer results. Learning and Growth objectives tend to be crafted so they will maximize success in the chosen Internal Process and Customer objectives. But what if the chosen Internal Processes are too narrowly focused? Or if the core strategy – on which BSC objectives are based – is flawed, and under-represents the human performance engine?

There is growing recognition – even among the founders of the Balanced Scorecard – that we need to build BSC’s from the bottom-up, as well as from the top-down. In fact, it likely that there are some basic motivators of superior human performance and wellbeing that should be captured in every Scorecard, and which should be tracked at regular (eg. quarterly) intervals.

If you look at the leading indicators for health and safety, profiled in the following section, they almost exactly mirror the drivers of success for:

- Sustainable high performance
- Employee Capability; and
- Employee recruitment and Retention
What is grabbing the attention of executive audiences is the idea of a *Capability/Wellbeing Index*, which captures the core drivers of employee capability and wellbeing.

**The Health/High Performance Synergy**

“...it seemed to us that inability to deliver results to customers was the number one source of frustration to frontline service employees”

Heskett J.L. *et al*  
*The Service Profit Chain*, 1997

There is a new paradigm for how we look at Strategic Health, and this requires that we understand the determinants of health and safety, *as well as* those of sustainable high performance. Fortunately there is a mountain of research that, “*Good health is good leadership is good business*”.

1) In 1991 and 1992, Northwestern National Life produced a series of studies on job stress. The finding from some 26,000 employees was that organizations which actively work to prevent workers’ stress, experience *less than half* the incidence of burnout and related health care utilization (and sick leave) of other organizations. NWNL released a list of key actions that their best group benefit clients took. These include:

- Improve communication
- Reduce personal conflicts
- Give adequate control
- Recognize/reward employees
- Reduce red tape

2) In 1992, the St. Paul’s Fire and Marine Insurance Company released its *Workers Under Pressure* study. In this highly acclaimed study of 28,000 workers, the role of organizational culture and management practices was again emphasized. The study recommended that the first step in reducing workplace health event rates and costs be to identify and remove unnecessary major work stressors by improving supervisory skills and work group relationships, reducing unnecessary work, ensuring fair employment and work practices, and setting “family-friendly” policies to facilitate balance.
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3) And then in 1995, Unum Insurance Company commissioned a report on 900,000 employees entitled, “The Determinants and Consequences of Workplace Disability”, from the Columbia School of Business. The researchers found that human resources practices profoundly impact sickness and disability rates. Foremost among these were:
   - The degree of employee involvement and participation in work decisions.
   - The extent and use of conflict resolution and grievance procedures.

4) Also, in the mid-1990’s, the World Health Organization noted that among the Western industrialized nations, corporate safety performance was plateauing. But a handful of stellar organizations have been breaking through this plateau and achieving superior results. All of these organizations were characterized by a culture of empowerment.

5) Finally, Drs. Martin Shain (Health Canada) and Jack Santa Barbara (Corporate Health Consultants) from Canada summarized the research compendium on what drives superior health and safety results. Turns out that the “Toxic work environment” is characterized by a workplace where employees have high psychological demands placed on them, and these are not balanced by a high degree of control over how work is done. And employees also are expending a high degree of effort, and do not feel they are receiving sufficient reward (we’re talking “psychic” pay, not $). In these workplaces, the sickness and accident cases rocket:
   - Back pain and heart problems (3x higher)
   - Conflicts, mental health problems, injuries, infections (3x higher)
   - Substance abuse (2x higher)

In parallel, there is a separate body of research on Employee Capability. In the highly acclaimed research from The Service Profit Chain, Harvard Researchers share the workplace experience and research on the “Cycle of Capability” – the key drivers of employee ability to deliver results to customers. These include the:
   - Latitude to meet customer needs
   - Authority to serve the customer
   - Knowledge and skills to serve the customer; and
   - Rewards for serving customer well
Also there is supporting research on Employee commitment and loyalty. In Aon’s 1999 Canada@Work study for example, work/life balance comes up as a key driver of commitment. The Gallup Organization has come up with their “Top 12” – key drivers of business outcomes in the areas of: productivity, profitability, retention, and customer satisfaction.

The Gallup Top 12

- I have the materials and equipment I need to do my work right
- At work, I have the opportunity to do what I do best every day
- I know what is expected of me
- In the last seven days, I have received praise for good work
- My supervisor, or the person I report to, seems to care about me as a person
- There is someone at work who encourages my development
- In the last six months, someone at work has talked to me about my progress
- At work, my opinions seem to count
- The purpose of my company makes me feel my job is important
- My associates (fellow employees) are committed to doing quality work
- I have a best friend at work
- This last year, I have had opportunities to learn and grow

Copyright: The Gallup Organization
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And Sears Roebuck found that the following 10 questions had the greatest predictive impact on customer loyalty – and the bottom line:

The Sears Employee Index

The Top 10:
- I like the kind of work I do.
- My work gives me a sense of accomplishment.
- I am proud to say I work at (Sears).
- How does the amount of work you are expected to do influence your overall attitude about your job?
- How do your physical working conditions influence your overall attitude about your job?
- How does the way you are treated by those who supervise you influence your overall attitude about your job?
- I feel good about the future of the organization.
- Sears is making the changes necessary to compete effectively.
- I understand our business strategy.

Do you see a connection between the work you do and the company’s strategic objectives? Source: Harvard Business Review, Jan/Feb, 1998

And in Prudential’s 1998 study on what drives Employee recruitment and retention success, the top factors are:

- Open communication
- Work/Life balance
- Management quality
- Supervisor quality; and
- The nature of work
If we take a look at the drivers of sustainable high performance – as outlined in research from, “Built to Last”, by Collins and Porras, or by Canadian researchers such as Gordon Betcherman at Queen’s University, we find that the common drivers of sustainable high performance are:

- Meaningful involvement and participation by employees in their work
- Rewarding work”, with high psychic pay
- Outstanding 360° communication; and
- Work/life balance

**Predictive Scorecards:** Good health is good leadership

Organizations such as Sears Roebuck, Nortel, and the Royal Bank have taken the Balanced Scorecard to new heights by rigorously measuring causal relationships between employee, customer, and financial results. Two articles bear mention: *Harvard Business Review* wrote in January-February 1998 about the Sears Roebuck transformation in, “The Employee-Customer-Profit Chain at Sears”; and the Conference Board of Canada wrote a similar report (#231-98) in 1998 on, “Loyal Customers, Enthusiastic Employees, and Corporate Performance”.

_Sears not only found a correlation between employee satisfaction, customer loyalty, and the bottom line, they found a causal link._

Specifically, they found from a surprisingly small battery of statistically significant employee satisfaction questions (10!), that a 5 point increase in employee satisfaction drove a 1.3 point increase in customer loyalty in the next quarter, which drove a 0.5% increase in revenues the following quarter.

| Employee Satisfaction (+5) | Customer Loyalty (+1.3) | The Bottom Line (+0.5%) |
INVESTING IN A HEALTHY WORKPLACE

The Business Case for a Healthy Workplace

For Sears a 4% improvement in employee satisfaction in 1997 amounted to a tidy $200 million dollars in additional revenues!

The Sears management team was deeply involved in developing this econometric model, and as a result bought into a reward system based on 1/3 employee satisfaction indicators, 1/3 customer loyalty indicators, and 1/3 traditional financial indicators. In translating the “softer side of Sears” into bottom-line outcomes, these leaders have created a model that is intuitive, robust, and appealing for employees, managers, and investors alike.

The Bank of Montreal is moving in a similar direction to hold leaders accountable for employee results. In this case, managers are given time and flexibility to identify employee measures that they feel they can impact.17

As Peter Block, author of *The Empowered Manager* notes,

“Choosing to be held accountable for results is different than being held accountable.”

**Strategic Health Focus enables us to position Health as an Investment**

30 years ago, leaders saw quality as a cost to be managed. Now it is treated as a profit centre, and stellar organizations pursue Six Sigma quality, or quality to the level of ~1/1 million defects.

*Our problems with health and safety boil down to an accounting problem.*

As long as we view health costs in silos, we can’t target the significant “Total Costs”, nor view health as an investment. And until we capture the opportunity costs of health, we have missed the economic engine for a healthy workplace.

The onus on Canadian organizations is to increase management awareness of their direct and profound role in employee health. And this is as much a profit-driven onus as a societal onus. The do-nothing approach to health is simply too expensive – not only because of an aging population and increasing health costs, but most importantly because of the huge opportunity costs.
Now that we can capture the underbelly of the health cost iceberg – the opportunity costs of a stressed, ill, injured workforce – the business case for a healthy workplace becomes irresistible.

The message of the ‘90’s about employee wellbeing was, “You should do this... it’s the right thing to do.”

Framed by the Balanced Scorecard and War for Talent, the message of the new Millennium for employee wellbeing is, “You can’t afford NOT to do this”!

Good health is good leadership is good business... and now we can prove it!
INVESTING IN A HEALTHY WORKPLACE

The Business Case for a Healthy Workplace

1 Source: Personal communication, Tom Mercyk, Strategic Management Team, City of Calgary, April 2000.
2 Source: Personal communication, Lieutenant-Colonel David A. Wrather, Deputy Project Director, PMO – Quality of Life, National Defence Headquarters, May 2000.
3 Source: Rigby D., 1999 Management Tools & Techniques Executive Survey, Bain Strategy Brief, January 8, 2000
11 Capability/Wellbeing Index, Copyright Healthy Business Inc., 2000
17 Personal Communications, Bill Wilkerson, 1999
Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #7A

HEALTH IN THE WORKPLACE
EMPLOYEE QUESTIONNAIRE

• Long Form Survey

April 2000 version

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HEALTH IN THE WORKPLACE

EMPLOYEE QUESTIONNAIRE

REVISED FIELD VERSION (H49-REVISED)

(APRIL 2000)

Please take a few minutes to fill out this questionnaire. Your answers will help the Workplace Health Committee plan to help you improve your health and well-being.
HEALTH IN THE WORKPLACE EMPLOYEE QUESTIONNAIRE

What this survey is about

Your work can affect your health. Most Canadians spend more than one-third of their waking hours at work. Workplace health programs can help employee and employer alike. After all, if we get healthier, we not only feel better, but we can be more successful in our work - and that benefits everybody.

Some examples of workplace health programs are stop-smoking programs, fitness programs and employee assistance programs. A health program could also involve changing the workplace itself - the surroundings, schedules or lines of communication - to reduce stress or increase workplace safety.

Although participation is voluntary, this questionnaire gives you a chance to influence health policy and programs at _____________. By answering the questions here, you can help give an overall picture of employee needs. That way, your workplace health policies and programs can be based on real needs.

Your answers will be anonymous and kept in strict confidence. Do not put your name on this questionnaire. Once you fill it out and seal it in its envelope, it will never be seen by anyone at ____________. Instead, an outside agency will count up the results and report to the Workplace Health Committee on the overall health needs and concerns of the employees as a group.

INSTRUCTIONS

- Please read each question carefully and answer as accurately as you can, with reference to your own specific job and life. Your answers are completely anonymous and confidential.

- Use a pencil so you can erase any answer you want to change.

- When you are finished, seal your completed questionnaire in the attached, stamped envelope and mail it to the address on the envelope.
RATING YOUR OWN HEALTH

1. In your opinion, would you say your health is ....

   01 Excellent  
   02 Very good  
   03 Good  
   04 Fair  
   05 Poor

2. What, if anything, would you like to do in the next year to *improve or maintain your health*? Check all the answers that apply to you.

   01 Drink less coffee or tea  
   02 Skip fewer meals  
   03 Eat better  
   04 Exercise more  
   05 Remove a major source of worry, nerves or stress from life  
   06 Learn to cope better with worry, nerves or stress  
   07 Change jobs  
   08 Change my home situation  
   09 Quit smoking, or smoke less  
   10 Drink less alcohol  
   11 Cut down on painkillers, sleeping or calming medications  
   12 Cut down on other medications  
   13 Cut down on non-medical drug use  
   14 Get medical treatment  
   15 Have my blood pressure checked  
   16 Try to control my blood pressure  
   17 Learn to be more assertive  
   18 Learn to control anger better  
   19 Learn to communicate better  
   20 Learn to manage time better  
   21 Get more or better sleep  
   22 Nothing
3. What, if anything, is stopping you from making this change? Check all the answers that apply to you.

01 Problem isn’t serious; there’s no rush
02 Not enough time
03 Not enough energy
04 Not enough money
05 Too depressed
06 Don’t know how to get started
07 No encouragement from family and friends
08 No encouragement or help from employer
09 It’s too hard
10 Don’t want to change my ways
11 Not sure I can really make a difference
12 Too much stress right now
13 Fear of the unknown
14 Lack of self-confidence
15 I don’t know what is stopping me

4a) In the last year, how many days in total were you away from work because you were sick? (for all causes)

01 _______ days

4b) In the last year, how many days in total were you away from work because you were injured? (at work or at home)

01 _______ days

5. How tall are you (without shoes)? [Please choose one or the other of the types of measurement below].

01 _______ ft  02 _______ in

or

03 _______ cm

6. How much do you weigh? IF YOU ARE PREGNANT, please record your average weight in the year before you became pregnant. [Please choose one or the other of the types of measurement below].

01 _______ lb,  or  02 _______ kg
# FEELINGS ABOUT MY HEALTH AND MY JOB

7. Show how you feel about the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) I am in control of my own health.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>b) I have an influence over the things that happen to me at work.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>c) My employer knows that stress at work can have bad effects on employees’ health.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>d) My employer makes every effort to keep unnecessary stress at work to a minimum.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>e) I am satisfied with the recognition I receive from my employer for doing a good job.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>f) I am satisfied with the amount of involvement I have in decisions that affect my work.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>g) My employer has a sincere interest in the wellbeing of its employees.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>h) I am satisfied with the fairness and respect I receive on the job.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>i) I feel I am well rewarded for the level of effort I put out for my job.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>j) I get as much out of my job as I put into it.</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>Agree Strongly</td>
<td>Agree</td>
<td>Not Sure</td>
<td>Disagree</td>
<td>Disagree Strongly</td>
<td></td>
</tr>
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</tr>
<tr>
<td>k) I think that, if I wanted to, I could quite easily find another job at least as satisfying as this one. 01 02 03 04 05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l) If I had to find another job today, I think I would have all the skills &amp; training I would need to do so. 01 02 03 04 05</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>m) At work, I feel I often have to do things or make decisions that I know are bad for my mental or physical health. 01 02 03 04 05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n) On the whole, I like my job 01 02 03 04 05</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>o) I look outside of my job for my main satisfaction in life 01 02 03 04 05</td>
<td></td>
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</tr>
</tbody>
</table>

8. On the whole, does your present job challenge you (make use of your skills and abilities)

01 too much?
02 too little?
03 just enough?
PHYSICAL ACTIVITY

9. In a typical week, how often do you spend at least 15 minutes at a
time in **vigorous** physical activity? [Vigorous physical activity in-
volves breathing much harder than normally and feeling so warm
that you are sweating from doing such things as: aerobics, using
exercise machines, fast bicycling, fast walking, running, racquet
sports, moving heavy objects, competitive swimming, etc.]

- 01 Never
- 02 Less than once a week
- 03 1 or 2 times a week
- 04 3 to 5 times a week
- 05 More than 5 times a week

10. In a typical week, how often do you spend at least 30 minutes at a
time in **moderate** physical activity? [Moderate physical activity in-
volves breathing harder than normally and the body feeling warm
from doing such things as brisk walking, bicycling, recreational
swimming, golfing, heavy gardening, etc.]

- 01 Never
- 02 Less than once a week
- 03 1 or 2 times a week
- 04 3 to 5 times a week
- 05 More than 5 times a week

11. In a typical week, how often do you spend at least 30 minutes at a
time in **light** physical activity? [Light physical activity refers to such
things as taking a stroll, light gardening, housecleaning, bowling,
stretch exercises, etc.]

- 01 Never
- 02 Less than once a week
- 03 1 or 2 times a week
- 04 3 to 5 times a week
- 05 More than 5 times a week
WORRY, NERVES OR STRESS

12. What, if anything, caused you excess worry, “nerves” or stress at work in the last six months? Check all the answers that apply to you.

01 I changed jobs
02 Too many changes within my job
03 I don’t like the hours
04 Too much time pressure
05 Unscheduled overtime
06 My duties are not clear
07 My duties conflict with one another
08 Management tries to control my work too much
09 I don’t have enough influence over what I do and when I do it
10 Too much responsibility
11 Supervisors or managers have unrealistic expectations of me
12 Deadlines
13 I don’t get enough feedback on how I’m doing
14 I’m not treated fairly here
15 I’m afraid of being laid off
16 My work tires me physically
17 My work tires me mentally
18 My work is boring
19 I am being sexually harassed by someone at work
20 I am being discriminated against
21 Conflict with other people at work
22 I feel isolated from my co-workers
23 I have difficulty speaking with people at work
24 I have difficulty understanding written instructions
25 I don’t have enough control over the pace of my work
26 I’m being harassed by someone at work (other than sexually)
27 Trying to cope with the results of an injury or illness
28 [Items 28-30 can be customized]
29
30
31 Nothing
WORRY, NERVES OR STRESS (cont.)

13. What, if anything, caused you excess worry, “nerves” or stress at home or outside of work in the last six months? Check all the answers that apply to you.

01 A close family member or friend has been ill or injured
02 A close family member or friend has died
03 Unexpected pregnancy
04 Birth or expected birth of a child
05 Adoption of a child
06 I have begun a new, close relationship (including getting married)
07 Divorce or separation
08 Arguments with my spouse, partner, children or roommates
09 Arguments with other family or ex-family members
10 Physical abuse at home
11 Verbal or emotional abuse at home
12 Child care and/or elder care problems
13 Child running away from home
14 Finding a place to stay or moving to a new home
15 Change in living situation (new roommate, family member leaving, etc.)
16 Took on a big expense
17 Took on a big loan
18 I don’t have enough money
19 Legal concerns and/or trouble with the law
20 My own alcohol or drug use
21 I have trouble balancing home and work responsibilities
22 I have too much to do
23 Fear of AIDS or other sexually transmitted disease
24 I have trouble getting to and from work
25 Alcohol or drug use of someone close to me
26 Nothing
14. What, if anything, would you like to do to cope better with worry, “nerves” or stress? Check all the answers that apply to you.

01 Exercise more
02 Get out more often, make new friends, socialize
03 Make a major change in my life (for example, change jobs, move or leave home)
04 Drink less alcohol
05 Cut down on painkillers, sleeping or calming medications
06 Cut down on other medications
07 Cut down on non-medical drug use
08 Drink less coffee or tea
09 Eat better
10 Spend more time with my family
11 Manage time better
12 Learn more about coping with worry
13 Learn to relax
14 Sleep more or sleep better
15 Get professional help
16 Get more money
17 Manage money better
18 Learn to be more assertive
19 Get more job skills
20 Learn to control anger better
21 Learn to communicate better
22 Improve the way I feel about how I look
23 I don’t know what I could do

15. What, if anything, is stopping you from making these changes? Check all the answers that apply to you.

01 Problem isn’t serious; there’s no rush
02 Not enough time
03 Not enough energy
04 Not enough money
05 Too depressed
06 Don’t know how to get started
07 No encouragement from family and friends
08 No encouragement or help from employer
09 It’s too hard
10 Lack of self-confidence
11 Don’t want to change my ways
12 Fear of the unknown
13 Not sure I can really make a difference
14 I don’t know what is stopping me.
SLEEP

16. How many hours do you usually sleep every night (or day, if on shift work)?
   01 _______ hrs

17. How often do you have trouble sleeping?
   01 More than once a week
   02 Once a week or less
   03 Never

18. In general, how often are you so physically or mentally tired at the end of work that you do not really enjoy your time away from work?
   01 Very often
   02 Often
   03 Not very often
   04 Never

SEEKING HELP

19. During the last year, did you seek help or counselling for a non-medical, personal or emotional problem of any kind?
   01 Yes, through my employer or through a service provided by my employer (such as an employee assistance program)
   02 Yes, but not through my employer
   03 No, but I thought about it
   04 No
NUTRITION

20. What if anything, would you like to do in the next year to improve how, when, what or how much you eat? Please check all that apply.

01 Eat more vegetables and fruit
02 Eat lower fat foods more often
03 Cut back on fast foods and junk foods
04 Cut back on snacks
05 Eat less (red) meat
06 Skip fewer meals
07 Take longer over my meals (eat less often on the run)
08 Eat more often with my family (or with others)
09 Understand more about proper eating (nutrition)
10 Learn more about healthy meal preparation
11 Eat less overall (smaller portions)
12 Nothing

21. What, if anything, is stopping you from improving how, when, what or how much you eat? Please check all that apply.

01 Limited choices in cafeteria or in eating places near where I work
02 Job pressures, job schedule (inc. travel)
03 Not enough time
04 Too hard to change my ways
05 Don’t know how to prepare, choose healthy foods
06 Expense (healthy foods cost more)
07 Dislike idea of dieting
08 Confused about what is healthy to eat
09 Bad experiences trying to eat better in the past
10 No support from family or friends
11 Too much stress at home
12 Don’t know how to get started
13 Don’t know what is stopping me
14 Nothing
SOMEONE TO COUNT ON

22. Of the people you know right now, who would really listen to you carefully and sympathetically if you were seriously upset about something? [Please check all items that apply to you]

a. No one
b. One or more co-workers
c. My spouse or partner
d. One or more other family members
e. One or more close friends
f. An EAP or EFAP counsellor
g. A doctor or another health care professional
h. A clergyman, rabbi or another religious official
i. A union steward
j. A lawyer
k. My boss

23. Of the people you know right now, who would you feel comfortable turning to for practical advice if you had a serious conflict or “run-in” with someone at work, at home or elsewhere? [Please check all items that apply to you]

a. No one
b. One or more co-workers
c. My spouse or partner
d. One or more other family members
e. One or more close friends
f. An EAP or EFAP counsellor
g. A doctor or another health care professional
h. A clergyman, rabbi or another religious official
i. A union steward
j. A lawyer

24. Of the people you know right now, who could you turn to for practical support (e.g. finance, shelter)? [Please check all items that apply to you]

a. No one
b. One or more coworkers
c. My spouse or partner
d. One or more other family members
e. One or more close friends
f. An EAP or EFAP counsellor
g. A doctor or another health care professional
h. A clergyman, rabbi or another religious official
i. A union steward
j. A lawyer
SMOKING, ALCOHOL, MEDICATION AND OTHER DRUGS

We would like to remind you that this questionnaire is confidential. No individual questionnaire can be identified. The results for your workplace as a whole will be tabulated by an outside agency, and the completed questionnaires will never be seen by anyone in your organization.

25. How many cigarettes do you usually smoke a day?
   01 None
   02 Fewer than 10
   03 10 or more

26. How many cigars do you usually smoke a day?
   01 None
   02 Less than 5
   03 5 or more

27. How many pouches of pipe tobacco do you usually smoke a day?
   01 None
   02 Less than 2
   03 2 or more

28. Do you use “smokeless” or chewing tobacco?
   01 No
   02 Yes, but not daily
   03 Yes, daily

29. How many regular size (12 oz or 360 ml) bottles of beer do you drink in a typical week? If none, put ‘0’.
   01 _______ bottles

30. How many shots (1.5 oz or 45 ml) of hard liquor or spirits do you drink in a typical week? If none, put ‘0’.
   01 _______ shots
SMOKING, ALCOHOL, MEDICATION AND OTHER DRUGS (cont.)

31. How many glasses (5 oz or 150 ml) of wine do you drink in a typical week? If none, put ‘0’.

01 _______ glasses

32. How many small glasses (3.5 oz or 105 ml) of fortified wine (such as sherry) do you drink in a typical week? If none, put ‘0’.

01 _______ glasses

33. In the last month, how often did you use over-the-counter medication or prescription drugs to help you sleep? (including herbal preparations)

01 Daily, or almost every day
02 2 or 3 times a week
03 Once a week
04 2 or 3 times during the month
05 Once only
06 Not at all

34. In the last month, how often did you use over-the-counter medication or prescription drugs to reduce pain? (including herbal preparations)

01 Daily, or almost every day
02 2 or 3 times a week
03 Once a week
04 2 or 3 times during the month
05 Once only
06 Not at all
35. In the last month, how often did you use over-the-counter medication or prescription drugs to calm you down? (including herbal preparations)

01 Daily, or almost every day
02 2 or 3 times a week
03 Once a week
04 2 or 3 times during the month
05 Once only
06 Not at all

36. In the last month, how often did you use over-the-counter medication (including herbal preparations) or prescription drugs to relieve depression?

01 Daily, or almost every day
02 2 or 3 times a week
03 Once a week
04 2 or 3 times during the month
05 Once only
06 Not at all

37. Do you use drugs (other than alcohol or tobacco) for non-medical reasons?

01 Often
02 Occasionally
03 Rarely
04 Never
SAFETY

38. Below is a list of health and safety hazards and unpleasant working conditions. Please indicate the ones about which you are very concerned in your workplace by checking the relevant boxes below.

01 Too much heat or cold
02 Bad air (stuffy, not enough air, etc.)
03 Too much noise or vibration
04 Poor work space or not enough work space
05 Poor lighting (too much, too little, etc.)
06 Having to perform unsafe work
07 Working with people who are under the influence of drugs or alcohol
08 Fire or explosion hazard
09 Litter or mess in work area
10 Not enough safety training
11 Risk of physical strain (e.g. back, wrist, neck)
12 Risk of eye strain
13 Dangerous chemicals
14 Biological agents or infectious diseases
15 Unsafe equipment or machinery (including office equipment)
16 X-rays, other radiation, or video display terminals
17 Electrical hazards
18 Slipping and tripping
19 Travel hazards, e.g. driving conditions, hotels
20 Fear for personal safety and security
21 Second-hand tobacco smoke
22 Bad work-station design
23 Lack of facilities or access for employees with disabilities
24
25 (items 24-26 can be customized)
26
27 Nothing

39. What would you do if your supervisor told you to do something that you thought was dangerous for your health and safety?

01 I would do it anyway and not complain to anyone in authority
02 I would do it, but complain to someone in authority later
03 I would not do it until I was satisfied that there was no danger
04 I am not sure what I would do
YOUR BACKGROUND

In order to make sense of the information you have given us so far, we need to ask a few personal questions. Your answers will help us figure out which groups have what needs. Please remember, though, that no one will use it to identify you.

40. How old are you?

01 Under 20
02 20 - 29
03 30 - 39
04 40 - 49
05 50 - 59
06 60 or over

41. What is your marital status right now?

01 Single/never married
02 Married
03 Widowed
04 Separated
05 Divorced
06 Living with someone

42. What is your sex?

01 Male
02 Female

43. How long have you been with the organization?

01 Less than 1 year
02 1 - 4 years
03 5 - 9 years
04 10 - 14 years
05 15 or more years
YOUR BACKGROUND (cont.)

44. What is your level of education?

01 Elementary school
02 Went to high school but didn’t finish
03 Finished high school
04 Went to community college but didn’t finish
05 Finished community college
06 Went to university but didn’t finish
07 University degree
08 Graduate degree

45. Do you have children for whom you are wholly or partly responsible?

01 Yes
02 No

46. Do you have other people (like elderly parents) for whom you are wholly or partly responsible?

01 Yes
02 No

47. What type of job do you have?

01
02 (To be customized)
03

48. What area do you work out of?

01
02 (To be customized)
03
HOW YOUR EMPLOYER CAN HELP

49. How do you think your employer could help you improve your health? Check all the items that you think would be helpful to you personally.

01 Provide (better) health benefits
02 Get more employee input on how work is done here
03 Introduce or extend job sharing or job rotation
04 Introduce or extend flexible hours
05 Provide more workplace health and safety training
06 Train supervisors or managers to be more sensitive to employees’ concerns
07 Communicate more openly with employees
08 Provide (better) employee assistance programs to help people get counselling on personal, financial or other problems
09 Provide or support child care
10 Look at how current shift schedules affect employees’ sleep and health
11 Support use of outside exercise facilities by helping with cost
12 Provide or support healthy eating program
13 Provide or support stop-smoking programs
14 Provide or support stress control program
15 Provide or support more social/family events
16 Encourage employees to spend time improving their health
17
18 (Items 17-19 can be customized)
19
20 Nothing

Thank you for your participation in this survey
Investing in Comprehensive Workplace Health Promotion

COMPANION PIECE #7B
STRESS, SATISFACTION & HEALTH

- Short Form Survey
- Suggestions for Analysis

This version has the potential for local data entry and analysis, unlike the longer survey shown in Companion Piece #7a

Health Canada 2001
STRESS, SATISFACTION & HEALTH

Short Form Survey

1. In your opinion, would you say your health is...

   01 Excellent
   02 Very Good
   03 Good
   04 Fair
   05 Poor

2. Please show how you feel about the following statements:

<table>
<thead>
<tr>
<th>Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   a. I am satisfied with the amount of involvement I have in decisions that affect my work. 01 02 03 04 05

   b. I feel I am well rewarded (in terms of praise and recognition) for the level of effort I put out for my job. 01 02 03 04 05

   c. In the last six months, too much time pressure at work has caused me worry, “nerves” or stress. 01 02 03 04 05

   d. In the last six months, I have experienced worry, “nerves” or stress from mental fatigue at work. 01 02 03 04 05

   e. I am satisfied with the fairness and respect I receive on the job. 01 02 03 04 05

3. How old are you?

   01 Under 20
   02 20 - 29
   03 30 - 39
   04 40 - 49
   05 50 - 59
   06 60 or over
4. What is your sex?

01 Male
02 Female

5. How long have you been with the organization?

01 Less than 1 year
02 1 – 4 years
03 5 – 9 years
04 10 - 14 years
05 15 or more years

6. What is your level of education?

01 Elementary school
02 Went to high school but didn’t finish
03 Finished high school
04 Went to community college but didn’t finish
05 Finished community college
06 Went to university but didn’t finish
07 University degree
08 Graduate degree

7. What type of job do you have?

01
02 (to be customized)
03

8. What area do you work out of?

01
02 (to be customized)
03
STRESS, SATISFACTION & HEALTH
Suggestions for Analysis

1. Enter the raw data into a computer file where each individual survey is given a code number (identifier). Programs such as SPSSX or SAS are very useful, but others can be used as well.

2. Once entered, the first step in analysis is to ascertain that all the “cases” (individual files) have completed data. If they are missing information in question #2, it is advisable to omit them from further analysis.

3. The next step is to do what are known as “frequencies” for all the questions. Frequencies simply mean, “how many people (and what percentage) answered the questions in the various categories provided?” It is helpful to transfer the results of this analysis from the computer print-out to a blank copy of the questionnaire so that all the different responses are arrayed in front of you.

4. The “powerhouse” of the survey is in questions 2a, b, c and d. The responses to these questions yield a result called the S.S.O.S., or “Stress Satisfaction Offset Score”.


5. The SSOS is computed in the following manner.

a) Write the computer program to score responses to q.2 using the values written in the boxes below.

<table>
<thead>
<tr>
<th>Agree</th>
<th>Strongly</th>
<th>Agree</th>
<th>Not</th>
<th>Disagree</th>
<th>Strongly</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2a I am satisfied with the amount of involvement I have in decisions that affect my work.

2b I feel I am well rewarded (in terms of praise and recognition) for the level of effort I put out for my job.

2c In the last six months, too much time pressure at work has caused me worry, “nerves” or stress.

2d In the last six months, I have experienced worry, “nerves” or stress from mental fatigue at work.

5b) Add and subtract according to this formula:

\[
\text{SSOS} = (Q2a + Q2b) - (Q2c + Q2d) \\
= (1 + 1) - (0 + 0) \\
= 0
\]

The scores will fall into a range of +2 to –2.

+2 = More satisfaction than Stress

-2 = More stress than Satisfaction

(and various points in-between)
STRESS, SATISFACTION & HEALTH
Suggestions for Analysis

Interpretation of Scores
Scores well below zero (“minus” scores, particularly those below −1) are known to be associated with a greater risk of experiencing health problems of many kinds. These problems include depression, anxiety, infections and cardiovascular diseases. The longer people are subject to “high stress / low satisfaction” conditions of work (as captured by the SSOS) and the more extreme they are, the more likely these health problems are to appear. However, many things can guard against the negative health effects of high stress / low satisfaction; these include: adequate social support, higher levels of physical activity, effective stress management and coping skills and even good nutrition. The difficulty is that, by their very nature, high stress / low satisfaction conditions tend to undermine the motivation required to be socially and physically active and to be attentive to healthy dietary practices.

On the other hand, scores well above zero (“plus” scores, particularly those above +1) are more likely to be associated with superior health and a sense of wellbeing. High satisfaction / low stress conditions of work appear to offer some level of protection against the kinds of health problems noted earlier. However, these positive effects can be diluted by personal practices that in themselves represent a threat to health; these include smoking, low levels of physical activity, excessive alcohol consumption and poor nutrition. The good news is that high satisfaction / low stress conditions may, by their very nature, offer motivational incentives to adopt or maintain healthy lifestyles.

6. The average of these scores is known as the “Business Health Culture Index” or BHCI. The Index is a measure of the extent to which the Health Culture of an organization is working for or against its Business Objectives. Health Culture, for these purposes, simply means the relationship between certain stressors and satisfiers at work.
   • If the BHCI is negative, it means that the health culture is characterized by more stress than satisfaction.
   • A Business-Negative Health Culture is one that works against the achievement of business objectives, whether these objectives are product-related or service-related.
   • If the BHCI is positive, it means that the health culture is characterized by more satisfaction than stress.
   • A Business-Positive Health Culture is one that works for the achievement of business objectives.
In this context a “neutral” score or index of “zero” means that the health resource of the workforce as a whole is working neither for nor against the business objectives of the organization.

7. At this point, there are various cross tabulations and sub-analyses that can be done using the BHCI. The following are recommended but others may occur to users.

Compute BHCl's for the following subgroups, and compare them. Do this by writing the BHCI results from computer analysis into blanks in the questionnaire. Observe where differences occur, paying particular attention to variations between groups of more than 0.5 in the total range of +2 to –2.

Also, mark any “linear” trends, e.g. a tendency for BHCl's to become more positive as health status is reported more favourably, as in the first question, below:

• **In your opinion, would you say your health is…**

  01 Excellent  
  02 Very Good  
  03 Good  
  04 Fair  
  05 Poor

• **Please show how you feel about the following statement:**

<table>
<thead>
<tr>
<th>Agree Strongly</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Disagree Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>05</td>
</tr>
</tbody>
</table>

I am satisfied with the fairness and respect I receive on the job.
STRESS, SATISFACTION & HEALTH
Suggestions for Analysis

• How old are you?
  01 Under 20
  02 20 - 29
  03 30 - 39
  04 40 - 49
  05 50 - 59
  06 60 or over

• What is your level of education?
  01 Elementary school
  02 Went to high school but didn’t finish
  03 Finished high school
  04 Went to community college but didn’t finish
  05 Finished community college
  06 Went to university but didn’t finish
  07 University degree
  08 Graduate degree

• What type of job do you have?
  01
  02 (to be customized)
  03

• What is your sex?
  01 Male
  02 Female
• **How long have you been with the organization?**

  01 Less than 1 year
  02 1 – 4 years
  03 5 – 9 years
  04 10 - 14 years
  05 15 or more years

• **What area do you work out of?**

  01
  02 (to be customized)
  03