HEALTH PROMOTION IN THE WORKPLACE: FRAMING THE CONCEPT; REVIEWING THE EVIDENCE

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The term "health promotion in the workplace" is a multidimensional concept that embraces at least two major philosophies about what health is and how it is influenced. The first philosophy sees health as largely the product of individual behaviour and as an individual responsibility. It may acknowledge the role of genetics and environment to some degree, but the type of health promotion arising from this set of beliefs focuses on individual behaviour. Consequently, the workplace is seen primarily as a venue through which various programmes can be delivered. Examples of programme areas are: fitness, stress management, smoking cessation, back care, weight reduction/nutrition, medication.

The second philosophy sees health as being influenced by a number of forces, a significant number of which are outside the individual's control. While acknowledging the individual's responsibility for his or her own health, this set of beliefs focuses on the role of the environment. Consequently, the workplace is seen as an influence on health in its own right. The attention here tends to be on the organisation and design of work in both its physical and psychosocial dimensions.

Any workplace claiming to "do" health promotion can be characterised by the subscription of its senior managers to one or other of these philosophies or, more commonly, to some blend of the two.

The 1997 Luxembourg Declaration on Workplace Health Promotion in the European Union[1] is an interesting document in this regard because it presents a "blended" philosophy as the ideal. Yet studies using the Luxembourg Declaration as a framework for research have revealed that by far the more common philosophy followed by organisations claiming to practice health promotion is that of focusing on the individual as opposed to the environmental.[2]

Be this as it may, it needs to be acknowledged that health, as we experience and observe it in the workplace, is produced or manufactured by two major forces:

- *What employees bring with them to the workplace* in terms of personal resources, health practices, beliefs, attitudes, values, and hereditary endowment
- *What the workplace does to employees* once they are there in terms of organisation of work in both the physical and psychosocial sense.

In practice, these forces do not act independently; they interact.[3] 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.

Nevertheless, this glaring dichotomy in the practical world of health promotion provides a useful point of departure for our analysis of the subject since it reflects to a large degree the organisation of the research literature in this area.

Research, until recently, was focused more on the first force ("personal health practices", for short) than on the second force ("organisation of work", for short), so there is more literature on the first than the second. Moreover, in regard to the organisation of work, a substantial amount has been written on the effects of the *physical* environment of work in the context of occupational health and safety, but the literature on the important *psychosocial* aspects of the organisation of work is still in its infancy.

The connection between the physical and psychosocial environments, and hence the term "organisation of work" that includes both, has been made by the fact that both are heavily influenced by high level management choices and decisions about how work will be organised. 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 significant.[4–6]

Moreover, the physical and psychosocial aspects of the working environment (organisation of work) can influence the abilities of individuals to care for their own wellbeing and to maintain

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their own "personal resources". Personal resources would include an individual's sense of efficacy, their resilience and "hardiness", and the quality and density of the social support they believe is available to them. These personal resources are affected by both work and non-work factors. This point has been well illustrated in an intervention study that found that smoking cessation was most effective when there was an integration of both health promotion and workplace occupational health and safety.[7]

Hence the upstream role of the organisation of work in the "production" of health turns out to be of profound significance. Figure 1 shows this picture in broad strokes. "Personal health practices and resources" acknowledges the reciprocal effect of both work and non-work factors on health and wellbeing. Similarly, the "organisation of work" includes both physical and psychosocial aspects of the working environment. 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.

Although this general picture may serve the function of a basic framework, 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.

IMPACT OF PERSONAL HEALTH PRACTICES ON THE HEALTH OF EMPLOYEES AND ON EMPLOYER HEALTH COSTS

The research literature usually deals with personal health practices (for example, eating, exercising, sleeping, drinking, smoking, coping with stress) as "risk factors" for various disorders, diseases, or incapacities, as well as being a risk factor for absenteeism and its associated health care costs.

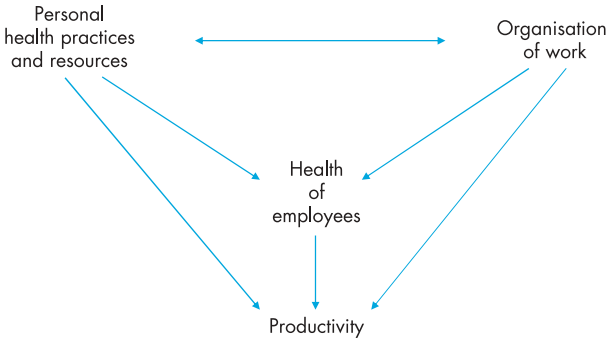


Figure 1 Forces acting on health and productivity in the workplace—the general picture. *Personal health practices* can affect productivity in two ways—directly and indirectly: directly, by "time out" for things like smoking breaks, caffeine "fixes", etc; indirectly, by first affecting health (e.g. bronchitis) 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 organisation of work and health practices. Such resources can ward off the negative effects of work organisation on health practices (and conditions), but they can also be defeated themselves if these negative effects are relentless and sustained. *Organisation 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.

There is little room for doubt that as the number of these risk factors associated with personal health practices increases, so do the negative health consequences.[8]

A typical result from this research literature would show that, if you take those employees who have three or more risk factors (for example, 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 (fig 2).

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. The problems with making comparisons between studies on this subject make it difficult to provide conclusions. However, the most confounding factor of all—and one that is rarely discussed in this type of study—involves the organisation of work. This is a significant omission, since there is good reason to believe that the degree to which personal health practices as "risk factors" translates into negative health outcomes depends on the extent to which the management culture of the workplace supports health.[1 7 9] This point will be explored further in the next section.

Again, the absolute size of this high risk group (three 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 employees with multiple risk factors 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.[10 11]

As noted earlier, "personal resources" such as self-efficacy, hardiness, resilience, quality, and density of social support act like "brokers" that moderate how health practices and health are effected by the organisation of work. While these personal resources 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 programmes. These are discussed later under "Programme content and design prerequisites". Personal resources are also targeted in the context of management practices that either reinforce or

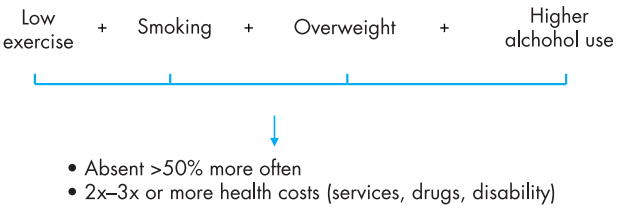


Figure 2 Personal health practices ("risk factors"), health costs, and productivity. "Risks" and "costs" are progressively related to one another: more risk, more cost. The size of the higher risk group varies from one workplace to another, even within the same industrial/commercial/business/government sector.

corrode them. This aspect is discussed later under "Supportive management climate".

IMPACT OF THE ORGANISATION OF WORK ON THE HEALTH OF EMPLOYEES

As a counterpoint to the "high risk employee" burden on employers, is the substantial and generally under-recognised burden of the organisation of work on the health of employees. This includes both the physical environment (including the burden of injuries and occupational illness[12 13]) and the psychosocial environment.[10 11]

The most significant research on the impact of the organisation of work on the health of employees has been done in the context of how the organisation of work can induce employee stress, which in turn affects both health and productivity. More specifically a quartet of psychosocial stressors that are disproportionately influential contributors to adverse health outcomes have been identified in the past few years. These are High Demand coupled with Low Control and High Effort coupled with Low Reward.[14–16]

- *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.[17]

JOINT IMPACT OF PERSONAL HEALTH PRACTICES AND ORGANISATION OF WORK ON HEALTH, PRODUCTIVITY, EFFICIENCY, AND COMPETITIVENESS

When considered as separate forces, the impacts of personal health practices and the organisation of work on health, productivity, efficiency, and competitiveness are clearly of great importance. 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. We may reasonably anticipate 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 proposition 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 organisation of work is highly correlated with employee health practices and conditions that are hostile to their wellbeing.[15 16 18] 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 where one ends and the other begins. Although the processes connecting job stress, home stress, and personal health practices are complex, one fairly clear link is 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.

PROMOTING HEALTH IN THE WORKPLACE: REVIEWING THE EVIDENCE

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 organisation of work, or sometimes both. What follows is a review of two areas of health related interventions: health promotion programmes as well as workplace organisational interventions.

The impact of health promotion programmes (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.[19] It is therefore reasonable to propose the conditions under which HPPs are most likely to succeed.[2 20]

For present purposes, "success" means:

- Showing that targeted groups (for example, "high risk") were actually reached by the programme at some pre-set level of penetration (for example, 50% of a population known to have high blood pressure as defined by specific criteria).
- Showing that, once enrolled, participants were retained to programme completion at some pre-specified level (for example, 75% retention).
- Showing desired outcomes at some level that is considered practically meaningful (for example, 25% of participants lowered their diastolic blood pressure by 5%, 10%, 15%, etc).
- Showing that desired health outcomes did 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 programme outcomes and the costs of designing and delivering the programme (for example, more "health", less "costs"). A typical expectation is that programme gains (however measured) should exceed programme costs. In more liberal "cost-benefit" analyses the criteria may be relaxed somewhat to include "value for money". For example, programme costs may exceed programme gains in financial terms, but this is still considered good value because certain gains (for example, 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: programme content and design prerequisites, and environmental or contextual prerequisites.

Programme content and design prerequisites

Within the variety of HPPs there appear to be certain common characteristics or features that predict success, whether the programme involves smoking cessation, stress management, nutrition, activity, or alcohol use, and whether

it aims "merely" to inform and raise awareness, change beliefs and attitudes, or change actual behaviour. Unfortunately, some of these success factors have political and organisational ramifications, and are not always followed, as was found by Harden and colleagues[21] in their review of the participative nature of many intervention programmes. These characteristics or features are:

- 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 programme or intervention is offered. *This is the principle of personal control or "self-efficacy"*.
- 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*.
- Attention to the fact that health practices are frequently interdependent; for example, 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 programmes focused 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*.
- 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 socioeconomic status, even though patterned variations according to these variables can be seen. This means simply that programmes 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*.
- Attention to the fact that people are increasingly strapped for time and energy, and need, as much as possible, programmes and services to come to them rather than the other way around. This means providing programmes 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 programmes in the communities where they live rather than where they work. Alternatively, it can involve making programmes available by the internet in workplaces that can support this kind of infrastructure. *This is the principle of convenience*.
- Attention to the preferences and needs of programme participants is more likely to be achieved when employees are actively involved in the identification of health issues, in the design of programmes, and in decisions about how, when, and by whom they are delivered. (for example, "health circles" are used in several European countries, while Joint Occupational Health and Safety Committees can play a similar role in North America). *This is the principle of employee participation*.

Environmental or contextual prerequisites

Programme 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.

- *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 programmes (given the limits of operating budgets) in preferred modes of delivery (for example, "virtual", live group, expert led, self-help, etc)
  - showing interest through requiring accountability from programme deliverers/coordinators, etc on a regular basis
  - providing a "family friendly" workplace through flexible work-time policies, giving adequate notice of travel requirements, etc
  - providing personal leadership through exemplary behaviour—for example, taking part in programmes, sharing personal health challenges and strategies to respond to them, etc.
- *Supportive management climate* refers to organising work in ways that promote rather than defeat health and safety. Essentially, this means keeping demands on time and energy within reasonable bounds, maximising 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 way, management will communicate their serious intention to create those working conditions that lies at the heart of the connection between the organisation 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.

When HPPs are run according to the stated principles, are operated under the supportive conditions as described, and assuming that these programmes have been purchased at fair market value, they will very likely show outcomes that at least offset the purchaser's investment, 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.

The impact of organisation of work interventions (OWIs) on health and productivity

The evidence to support the impact of organisation of work interventions (OWIs) on health and productivity is not as conclusive. There is a body of research on workplace interventions that are designed to have an effect on how work is organised, and the thought is that this will have an effect on employee health whether this is intended or not. However, most of the research on the outcomes 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.

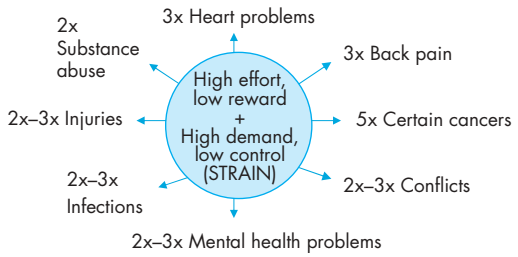
For example, a study that shows that there was an increase in employee control or influence as well as employee rewards as a result of an OWI directed at management styles would lead us to anticipate improvements in employee health indicators. But this would have to be seen as presumptive or circumstantial evidence in the same way that smoking cessation is presumed to reduce the likelihood of cancer and other diseases. In that case, we have population-wide data that tell us smoking and cancer are linked, and we assume, every time we do a smoking cessation programme, 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 (see fig 3). We still have to assume that successful modifications to these styles will produce superior health outcomes.

There are some studies that specifically look at the health effects of OWIs, whether these were intended or not.[3] But the usual reason for including any measure of health is its presumed effect on productivity. Consequently, in this research, most of the measures are only obliquely related to the health status of employees—indicators such as absenteeism, health claim costs (drugs, services), and 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 still not clear from such studies whether improved health was the driver of cost reductions or whether the reductions in absenteeism, claims, disability, etc resulted from efficiencies introduced in the course of improving productivity. Unfortunately, as of now, neither is it clear whether such changes are sustained.

CONCLUSION

Taken as a whole, the evidence concerning health promotion in the workplace suggests that health promotion programmes will only be effective in enhancing the health status of the workforce when the interventions attend to both individual and environmental influences. Focusing on personal health practices through programmes targeted exclusively at individual behaviour is likely to yield minimal benefits compared with interventions that also target the organisation and design of work as key influences on health. A comprehensive approach to health promotion in the workplace is therefore one in which both individual and organisational influences on health are targeted simultaneously.



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

Figure 3 The costs of an unhealthy workplace.

QUESTIONS (SEE ANSWERS ON P 585)

(1) The legitimate area of health promotion in the workplace is understood to include which of the following? (Please indicate the single most appropriate answer)
- (a) Attempts to help individual employees improve one or more of their personal health practices (e.g. activity levels, eating habits, stress management, smoking)
- (b) Attempts to reinforce the personal resources of individual employees (e.g. self-efficacy, social support)
- (c) Attempts to modify the organisation and design of work to enhance its capacity to promote health (e.g. through policies designed to permit greater employee involvement in decisions about the planning and execution of their own work)
- (d) All of the above

(2) Please indicate whether the following statements are generally true or false:
- (a) Costs attributable to poor health in the workplace can be explained exclusively by reference to the personal health practices and conditions of individual employees
- (b) The ways in which work is organised and designed have no bearing on the health status of employees

(3) Three of the key prerequisites for the design of effective health promotion programmes echo key features of the organisation of work identified as significant influences on employee health status. Which of the following programme prerequisites are they?
- (a) The principle of interactivity
- (b) The principle of personal control or self-efficacy
- (c) The principle of wide appeal
- (d) The principle of social support
- (e) The principle of employee participation
- (f) The principle of convenience

(4) Please indicate whether the following statements are true or false:
- (a) The role of ''management support'' in determining the effectiveness of health promotion programmes is trivial
- (b) The significance of a ''supportive management climate'' in determining the effectiveness of health promotion programmes has not been established

(5) Which of the following conditions of work have been shown to influence the health status of employees? (Please indicate the single most appropriate answer)
- (a) High demand
- (b) Low control
- (c) High effort combined with low reward
- (d) None of the above
- (e) All of the above

Additional references appear on the *OEM* website (www.occenvmed.com/supplemental)

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