Broadening the Scope of Worksite Stress Programs: A Guiding Framework

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Abstract

Worksite stress programs have proliferated in recent years. A large proportion of these programs focus on helping individual employees learn about stress and develop better coping skills. Few programs attempt to reduce the stressful aspects of the job or the organizational context. In order to facilitate the development of a broader array of stress reduction programs, the authors provide: 1) a conceptual framework upon which worksite stress programs should be based, 2) a guide to the variety of decision points in the program development process, 3) an exploration of the reasons why a broader range of stress programs have not heretofore been developed, and 4) suggestions for creating a context amenable to innovative worksite stress programs. (Am J Health Promot, 1990; 4(6):413-420)

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INTRODUCTION

The concept of stress and its potential effects on health are currently of great interest to the public, researchers, and practitioners. Considerable empirical work has investigated the nature and effects of occupational stress. Occupational stress has been linked to both short-term effects such as job anxiety, job tension, and job satisfaction and longer-term outcomes such as depression, ulcers, cardiovascular disease, and mortality.[1-5] As a result of these findings, worksite stress management programs have proliferated and have become a staple component of the worksite health promotion industry.[6]

A majority of worksite stress programs have focused on providing information about stress to employees and helping employees develop a broader and more effective repertoire of coping skills.[7] With some notable exceptions, worksite stress programs target the beliefs, attitudes, and behaviors of individual employees rather than the organizational factors and job conditions that may be sources of stress. The narrow focus of prevailing stress reduction programs is particularly perplexing given that there is some evidence which suggests that individual coping efforts are less than successful in dealing with worksite stress.[8-10] In a longitudinal study, Menaghan and Merves[8] tested the effectiveness of four coping strategies in reducing occupational distress and subsequent occupational problems. None of the strategies they investigated had an effect on the prevalence of worksite problems. Only one coping strategy, making optimistic comparisons, was associated with concurrent lower levels of distress.

Worksite stresses may be more impervious to individual coping efforts than are stresses in other domains of life such as parenting and marriage.[8-10] It has been suggested that stressful organizational, social, and physical conditions at work are not easily influenced or controlled by individual workers.[9] Thus, active coping attempts by individuals to deal with worksite problems are often unsuccessful. One study has shown that the lack of success of individual coping efforts may, in turn, increase perceived occupational stress levels.[11]

If indeed individual coping efforts are not effective in dealing with occupational stress, then one might expect worksite stress programs that focus on improving individual coping skills to be equally ineffective in alleviating the deleterious consequences of worksite stress. Although there are few rigorous, controlled evaluations of worksite stress management programs, results do indicate quite limited success in reducing stress.[12-15] Nevertheless, some of these interventions have had short-term success in reducing stress-related symptoms such as anxiety levels and sleep disturbance.[13,14] Therefore, stress management programs which focus on the individual may be health promotive, even though they appear to do little to reduce worksite stress.

In addition to being minimally effective, individual level interventions may have adverse side effects. Health educators may be inadvertently reinforcing participants' perceptions of the uncontrollability or unavoidability of the stressors that they face. Rather than empowering people by providing them with improved coping skills, stress management programs may be increasing employees' perceptions of individual inadequacy and hopelessness. By trying to change the individual, as William Ryan[16] has pointed out, it is as if the pertinent question is "What is wrong with the victim that makes them suffer these ill effects?" rather than "What is wrong with the environment that is causing these ill effects?"

The purpose of this article is not to provide an exhaustive review of worksite stress programs. Several review articles have recently been published which address the effectiveness of such programs.[8,12-15] However, little attention has been paid to the underlying assumptions of these programs nor to the program development process. The goals of this article are fourfold: 1) to make explicit the nature of stress, thus providing a conceptual framework upon which worksite stress programs should rest; 2) to delineate the variety of decision points in the program development process; 3) to explore the reasons why a broader range of stress reduction programs are not being developed; and 4) to offer suggestions for creating a context amenable to organizational stress-reduction programs.

THE NATURE OF STRESS

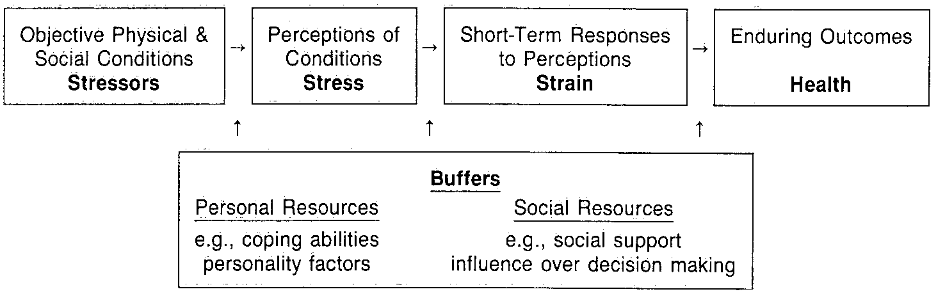
The study of stress has been plagued by a lack of adequate definition of its central concept. The literature has been so confused that some have opted for throwing out the term "stress" altogether,[17] and thus forcing authors to more clearly define their concepts. Some early investigators conceptualized stress as a physiological response, in which stress was indicated by changes in biological functioning.[18] Others perceived stress to be an environmental stimulus. For these researchers, stress was indicated by life events[19] or by the presence of particular environmental conditions such as heavy workloads or machine-paced work.[20] There is now a growing consensus that stress resides neither in the environment nor in the person but in the transaction between the two. The term "stress" best describes a process by which objective physical and social conditions are appraised and reacted to by individuals.[21-24]

Figure 1 illustrates this transactional model of stress. Objective conditions in the social and physical environment are called stressors. These may be life events such as divorce or retirement, chronic problems such as poor relations with one's supervisor, or physical conditions such as overcrowding or excessive noise. These conditions are appraised by an individual to be either stressful or not. In the original formulation of this transactional model, a stimulus was considered stressful when it was perceived as requiring more resources than the individual thought s/he had available. In other words, stress resulted from situations where perceived demands exceeded perceived abilities or resources.[21] The elucidation of the person-environment fit model[25] broadened the conceptualization of stress to include all transactions between the environment and the person in which the needs and the abilities of the person do not match the characteristics and demands of the environment. Thus, a lack of stimulation or challenge as well as overstimulation can be stressful. Indeed, there is much evidence to support this broader concept of stress, especially in the study of blue-collar workers.[20,26-27]

Short-term responses to perceptions of stress are called strains. These may include psychological responses such as increased anxiety or depressive symptomatology. There may also be physiological responses such as an elevated heart rate or increased levels of excreted catecholamines.[5] These short-term responses may give rise to more enduring or chronic health problems. These health problems vary across individuals because stress plays a nonspecific role in disease etiology.[28] For example, some

Figure 1

The Stress Process



Adapted from the model used in occupational stress research at the Institute for Social Research[22,29,30]

people may develop ulcers from high levels of perceived stress while others may develop cardiovascular disease.

The relationships outlined above are the backbone of the stress process. However, other factors affect these relationships. An important component of the transactional model of stress is its focus on the factors that influence the way people appraise stress and react to threat and challenge. These factors are called *buffers* and include characteristics of the individual and of the social environment. Personal resources such as good health and effective coping abilities may result in lower perceptions of stress or fewer deleterious responses to perceived stress.[21,31,32] Social resources such as high socioeconomic status, a well-functioning social support system,[30] and a workplace which allows employees to participate and have influence in decision-making[33] may also protect an individual from the harmful consequences of exposure to stressors. Although many of these factors that buffer the effects of stress have direct beneficial effects on health as well, direct effects will not be discussed because this article focuses on interventions in the presence of a stressor.

USING INFORMATION ON THE NATURE OF STRESS TO GUIDE THE DEVELOPMENT OF WORKSITE STRESS PROGRAMS

Figure 1 also illustrates the many possible targets of intervention in the stress process. One intervention strategy is to attempt to reduce the stressors by altering the objective environment. This strategy focuses on the *stressor* itself. Such interventions might include organizational changes that improve the structure of work or policy changes that lead to a reduction in stressful work events.[34] For example, noise might be reduced, work schedules might be revamped, reward systems might be modified to be more equitable, work roles might be clarified, or new channels of communication might be instituted.

An alternative intervention strategy is to try to reduce individual perceptions of stress or harmful responses to perceived stress. This strategy focuses on the *buffers* in the stress process. Such interventions might attempt to increase employees' personal resources for dealing with work situations. For example, a program might try to increase employee coping skills such as problem-solving or time-management so as to increase the chances that individuals will be able to deal with problems that arise and thus perceive their jobs as less stressful. Some programs attempt to increase employees' personal resources so as to decrease the effect of stressful working conditions. These programs, which represent the majority of existing programs, may include teaching emotion-management skills such as meditation, relaxation, or biofeedback. All of these programs are oriented toward strengthening individual employees' abilities to cope with stress and to resist its deleterious effects on physical and mental health. Ideally, programs targeting a given behavior would be based on empirical evidence that these behaviors actually buffer the effect of stress.

Other programs which focus on the buffers in the stress process try to increase employees' social resources. For example, they may attempt to strengthen employee support systems so that employees have more resources to draw upon during times of high stress.[30,35] Some programs attempt to establish more participative management practices in the workplace so that employees share in the decision-making and thus perceive problems less as burdens to be borne and more as challenges to be met.[36,37]

Thus, it is clear that there are many options for the program developer of worksite stress programs. One can choose to reduce stressors, to modify employee perceptions of conditions in their environment, to reduce individual reactivity to a stressor, or to enhance the social environment as a buffer against stress. Therefore, the target for change may be individual attitudes or behavior, group norms or behavior, or organizational policies and priorities.

DECISIONS IN THE PROGRAM DEVELOPMENT PROCESS

The designer of worksite stress programs has many decisions to make, including choosing the target of intervention. We have developed a decision tree to aid in this process. In order to make the best use of this decision tree, one must obtain information about the prevalence of particular stressors, the distribution of perceived stresses across the worksite population, and the health status of the employees. Thus, it is important that a needs assessment be completed before the stress program is developed. This needs assessment may take the form of a survey of the employees in the worksite, semi-structured interviews with key informants, or a compilation of information from already existing data sources. No matter which method is used, the following questions need to be addressed:

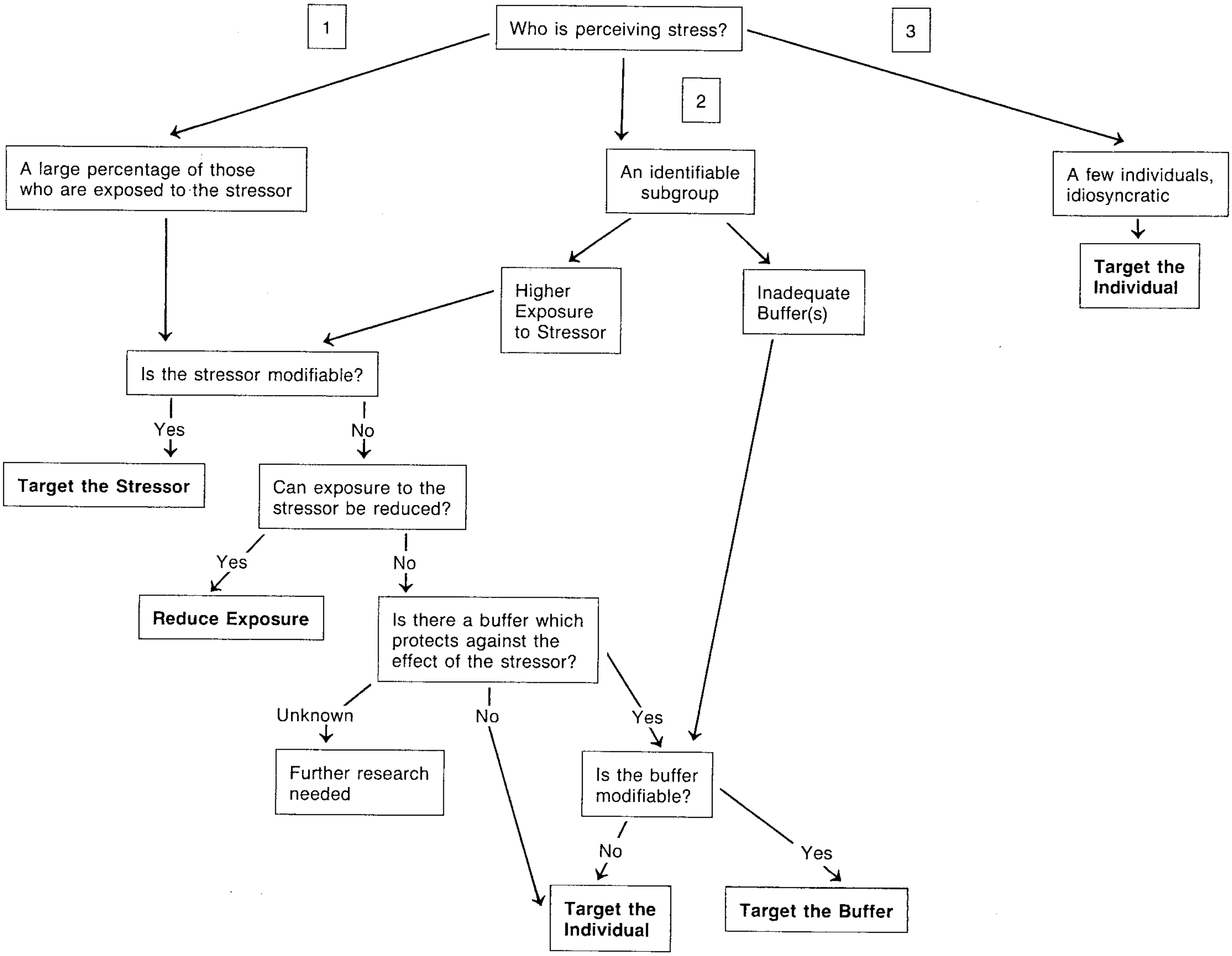
1. What are the various physical and social conditions in the workplace that are potential stressors?
2. Who perceives these conditions as stressful?
3. How widespread is the perception of stress?
4. To what extent are these perceptions of stress linked to short-term and long-term adverse outcomes?

It is important to note that high levels of perceived stress will not always be associated with high levels of strain. Often, interest in developing worksite stress programs stems from the observance of high levels of strains such as job dissatisfaction, substance abuse, and absenteeism. However, when designing an intervention, it is most important to ascertain levels of perceived stress and their causes. For the employees experiencing stress, the knowledge that they are not being made ill by the stressful aspects of their work does little to assuage their concerns nor does it compromise the validity of their complaints. As Sylvia Tesh[38] states:

> If careful research proves a suspect chemical nontoxic, people know they can work safely with

Figure 2

Choosing a Target of Intervention



> it. But if research shows that a demanding and difficult job does not cause disease, the job nevertheless remains demanding and difficult.

Thus, levels of perceived stress among employees guide the points of entry into the decision tree (see Figure 2).

There are three main branches to the tree. The first branch is used when a large percentage of employees who are exposed to the stressor have high levels of perceived stress. The second branch is used when an identifiable subgroup of the employee population is experiencing high levels of perceived stress. The last branch is used when only a few individuals are experiencing stress.

Use of this decision tree can be illustrated with a few examples. Consider the case of a community service agency that is experiencing a high rate of turnover and absenteeism. The director of the agency, concerned about the possible adverse consequences of high levels of stress for both the organization and individual employees, decides to fund a needs assessment. All agency employees are surveyed about the characteristics of their jobs, their perceived stress, and their behavioral and emotional responses to stress. The survey results indicate that almost all of the social workers who work in this agency report high levels of stress and that the social workers as a group have a higher mean level of perceived stress than the other employees in the agency. Thus, the social workers are chosen as the prime targets of the worksite stress intervention.

In order to continue down the first branch of the decision tree, the nature of the stressor must be known. Further investigation leads to the conclusion that it is not being a social worker per se that is perceived as stressful and linked to adverse health outcomes, but rather it is having a heavy caseload. The program developer then asks, "Is this stressor modifiable?" Discussions with the agency director result in a positive answer to this question. Therefore, the most appropriate program will target the stressor. In this example, reducing caseloads or distributing cases more evenly is chosen as the target for intervention.

In some cases, the stressor is not modifiable but rather is inextricably linked to the work process. For example, clerical staff may report that their jobs are stressful because they are repetitious and lack challenge. There may be no way to make filing any more challenging. In this case, the program developer would follow the "No" branch after the question "Is the stressor modifiable?" and proceed to the next question: "Can exposure to the stressor be reduced?" Frequently, the percent of time an employee is engaged in a particular activity can be reduced by job redesign or job rotation. For example, instead of having one person do all the filing and only do filing, jobs may be redesigned to distribute filing duties and other more challenging tasks evenly among employees. Alternately, employees may spend a week at one type of task and then rotate or change tasks.

If the stressor is not modifiable and it is impossible to reduce employee exposure, the next question to be addressed is: "Is there a buffer which protects against the effect of the stressor?" For example, child welfare workers are likely to perceive repeated exposure to and knowledge of neglected and abused children as stressful. This stressor is inherent to the job and reducing exposure is probably not possible. However, there may be factors which buffer child welfare workers from experiencing distress when they are confronted with the realities of child abuse cases. For example, sympathy, understanding, and affirmation from co-workers may be effective buffers. If effective buffers can be found, the program developer then assesses their modifiability and attempts to increase them if possible. If no effective buffers are indicated, the program developer must target the abilities of individual employees to cope with stress. This completes a description of all possible pathways in the first branch of the decision tree.

The second branch of the decision tree is useful when a subgroup of the employee population is reporting significant stress. Returning to the example of the social workers, the needs assessment may reveal that two thirds of the social workers are suffering high levels of perceived stress and strain. Additionally, those social workers who report high levels of stress are those who get assigned certain types of cases. They are experiencing *higher exposure* to a stressor. In this case, the decision tree guides the program developer to the first branch of the decision tree and the pathway previously described. On the other hand, if what differentiates those social workers with high levels of perceived stress from those with low levels is not a characteristic of their work but rather, a characteristic of their social environment, a buffer, this would lead the program developer down the "Inadequate Buffers" branch of the decision tree to the question "Is the buffer modifiable?" An example of a potentially modifiable buffer might be the quality of the social workers' relationships with their supervisors. Those social workers who maintain supervisory relationships characterized by emotional support perceive lower levels of stress. Thus, a worksite stress program might focus on improving the quality of these relationships as the primary intervention strategy. The intervention would depend on an assessment of the root cause of the problems in the relationship. For example, the focus might be to improve supervisory skills or to improve supervisors' and supervisees' communication skills. Another possible strategy would be to change the reward structure for supervisors to reinforce quality supervisory behavior.

In some cases, the buffer that is protecting many employees from perceiving stress is not a characteristic of the social environment, but is an attribute of the individual such as a well-developed ability to solve problems. If this were the case, targeting the buffer would involve intervening to promote individual problem-solving skills.

The third branch of the decision tree is appropriate when the needs assessment indicates that only a few, idiosyncratic employees are reporting high levels of stress and strain. There does not seem to be any common stressor nor any common buffer that is responsible for their condition. Instead, these employees may be unusually vulnerable to some of the potentially stressful conditions of their work. They may have poor coping abilities or their coping resources may be sapped by having to deal with difficult situations outside of the workplace. Thus, individual counseling might be offered to these employees. The intervention would depend on the source of their vulnerability.

Three important characteristics of this decision-tree should be emphasized. First, as mentioned previously, use of this decision tree presupposes a large body of knowledge about stressors, buffers, and their effects. For many stressors and target populations, this body of knowledge exists. For others, it does not. In either case, an extensive needs assessment provides the richest and most appropriate data for the specific target population. Such an assessment adds to the cost and time involved in developing a stress program, but the development of easily accessed, standardized, valid and reliable measures[39] makes it feasible even for smaller companies to implement comprehensive assessments. Second, the various available targets of intervention are not mutually exclusive. Interventions may incorporate several different goals and strategies. A job-redesign strategy such as reducing the size of caseloads may well be complemented by an employee training program in active coping skills. This decision tree can be used as a guide for setting intervention priorities. Lastly and most importantly, this decision tree does not rest on the assumption that one should intervene solely at the individual level. On the contrary, the individual is the target of change only when all other possibilities have been exhausted.

Many authors have advocated for organizational, stressor-reducing interventions.[13,33,36,37,40-43] The decision tree emphasizes the importance of such interventions for several reasons. Even though interventions which attempt to strengthen employee stress management skills have not proven particularly effective, alternative strategies which target worksite stressors have been inadequately explored.[15,34,40,41] There are few empirical studies of the effectiveness of job redesign programs or organizational change programs. There has been no well-publicized study to date which has compared the efficacy of individual stress management approaches to organizationally focused stress reduction approaches. Such studies would be quite helpful in determining which strategies best meet the needs of organizations and individual employees. The need for empirical guidance is reason enough to test a broader scope of worksite stress programs. However, the possibility of creating adverse effects when the individual is given responsibility for curing the effects of organizational level stressors creates an absolute imperative for developing and testing interventions which target the *stressor,* not the individual employee.

BARRIERS TO THE DEVELOPMENT OF A BROADER RANGE OF WORKSITE STRESS PROGRAMS

Given current knowledge about the nature of stress, the discouraging empirical findings about the efficacy of individual coping strategies at the workplace, and the availability of other appropriate targets of intervention in the stress process, why are most interventions still at the individual level? Perhaps the point in the decision process at which many program developers choose to target individual coping skills is when they must determine the controllability or modifiability of the stressor. Professional and general socialization may suggest that organizational and social level stressors are uncontrollable. Too often, worksite stressors may be considered immutable and unavoidable, like natural disasters such as tornadoes or hurricanes. Just as prevention is as much a matter of philosophy as good science, the choice of a target for intervention is guided as much by our predispositions about how the world works as it is by empirical evidence. Living in a highly individualistic society, much of our folklore depicts individuals overcoming massive environmental obstacles through some combination of skill, hard work, and luck. Therefore, the first inclination may be to teach people to live with an obstacle rather than remove it or modify it.

An individualistic society influences approaches to the stress process in a second way. Organizational and social level stressors may be construed as uncontrollable, but the way potential stressors are perceived and responded to is thought to be well within the control of individuals. Since few social and organizational conditions are stressful for everyone, there is the belief that employees make these conditions stressful by perceiving them as such. Furthermore, when there are even a few individuals who don't perceive the conditions as stressful, it reinforces the notion that response to a stressor is well within the control of individuals, and, indeed, it is the responsibility of individuals to change the way they interpret and experience events and environments. When this overarching philosophy guides the development of worksite stress programs, the programs fall prey to a victim-blaming overemphasis on individual control of the experience of stress.

One piece of evidence that this reliance on individual-oriented programs is in part determined by cultural norms is the cross-cultural differences in approaches to occupational stress. European countries, specifically Scandinavian ones, have been addressing the problem of worksite stress through organizational and societal-level change efforts for quite some time.[42,43] Their job redesign and social change efforts have often been anecdotally linked to positive outcomes, for both the organization and the employee.

An additional force which leads to the development of interventions which target employee behavior is the profit-making goal of many organizations. Organizations whose primary goal is profit-making may lean strongly toward interventions targeting the individual because they are likely to incur lesser *immediate* costs than almost any organizational-level intervention. Several authors have noted that individual-level interventions are often less expensive than organizational change or job redesign programs and are least disruptive of the organizational status quo.[14,15] More often than not, organizational change programs command large commitments in terms of time and resources and are most likely to run up against organizational inertia and actual resistance. Perhaps it is tempting, particularly in a corporate setting, to trade effectiveness for efficiency. Additionally, a health educator or other professional employed by an organization may realistically fear "rocking the boat." However, in choosing a "window-dressing" or less effective intervention rather than doing the work needed to truly address the problem, a disservice is done to both the organization and individual employees. The organization may be trading lower immediate costs for larger costs in the long run.

High levels of stress have been shown to be associated with poor productivity, absenteeism, and high turnover.[44-47] Thus, it is possible that organizations will reap larger profits in the long run when reducing stressors at the workplace. Indeed, the few organizational-level interventions that have been implemented have enhanced organizational effectiveness.[36,48,49] However, in the absence of a compelling body of evidence and well-designed cost-benefit studies, implementing such programs is apt to meet with considerable resistance.

Strategies for Change

How then can health educators go about broadening the focus of worksite stress interventions? If the issue were framed as simply one of targeting individual program developers to change their orientations to occupational stress, then all of the responsibility for change would be unfairly put on individual practitioners. There are obviously powerful social and economic factors that hinder the development of interventions that target group, organizational, and societal stressors. Awareness of the issue by individual practitioners and researchers is not enough.

To truly effect change, professional associations with an interest in this area must be committed to making the development and testing of alternative worksite stress interventions a priority. Professional associations have an agenda-setting capacity which can be used to bring attention to and validate the need for interventions. This agenda-setting capability includes:

1. Advocating and providing technical support for the inclusion of organizational change skills in the curricula of accredited programs.
2. Using position papers, lobby activities, and consultation to educate key organizational, community, state, and federal policy-makers and funding institutions as to the importance of developing and testing a broad range of worksite stress programs.
3. Using the reward structures available to the association to support members in developing, testing, and disseminating the results of such programs.
4. Sponsoring interdisciplinary conferences not only to share diverse perspectives and knowledge about how to change stressful aspects of work, but, in addition, to begin examining and addressing the factors which are inhibiting the development of a broader range of programs.

Universities that train health educators and health promotion professionals have a role to play in each of those points as well. Additionally, those in research and university settings should focus on and encourage students to examine the forces that keep the focus of worksite programs on the individual rather than on the stressor itself. A better understanding of these forces will direct and strengthen efforts to effect change. Common experience points to some likely areas of investigation: the effect of professional socialization on decision-making processes, the lack of funding for certain types of interventions, the inability to gain necessary commitments for such interventions from worksites, and the barriers to interdisciplinary research. One way to increase the understanding of these forces is to look at the factors that have lead to the development and successful implementation of the few existing organizational level interventions. What are the special characteristics of these projects and of the contexts in which they work?

The activities suggested above will take time to come about and have effects. In the meantime, practitioners are faced with existing demands for worksite stress programs. Some immediate strategies for those currently developing and/or implementing worksite stress programs are:

1. Suggest limited and carefully implemented programs which target stressors rather than individuals. Use the arguments put forth in this article to convince employers of the need for them. Evaluate the programs as rigorously as possible.

2. When such a program is implemented, make a special point to disseminate any results. If journal publication is difficult, newsletters, conference presentations, and word of mouth are better than no dissemination at all.
3. Take courses on organizational development and community organization to get ideas and help guide your efforts. Some introductory resources are included in the references.[50-51]

The activities of professional organizations and academic researchers suggested above will help provide a more supportive climate for individual practitioners' efforts in this area. By working together in a concerted effort, those interested in alleviating deleterious effects of worksite stress may be able to create an intellectual and economic environment that can support organizational and societal level preventive interventions.

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SO WHAT? Implications for Health Promotion Practice

A systematic, knowledge-based, decision-making framework for determining the appropriate target of intervention for worksite stress programs can be used by practitioners to guide and improve program development.

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