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Occupational Stress Intervention

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The topic of occupational stress has received considerable research attention during the last decade and has emerged as an important occupational safety and health concern. Worker compensation claims for stress-related illnesses, for example, were the fastest growing type of claim in the 1980s, comprising more that 11% of all such claims. Concern over problems associated with occupational stress and their costs has fostered interest in intervention strategies. While specific work stressors and their resulting physical and mental health consequences have been identified, relatively few successful interventions have been documented in the literature. This article discusses primary, secondary, and tertiary interventions efforts in the area of occupational stress and argues for efforts to increase understanding of the occupational stress intervention process. © *1996 Wiley-Liss, Inc.**

KEY WORDS: job stress, organizational stress, intervention research, disease prevention

INTRODUCTION

As made evident in recent discussions of health care reform in the United States, costs associated with chronic diseases represent a massive drain on the U.S. economy. Not so evident, however, is the fact that many chronic diseases are influenced by employment. As Collins [1984], in his 1983 George H. Gehrman Lecture of the American Occupational Medicine Association noted, there is a "relentless" trend toward a "fuzzier and fuzzier" boundary between the occupational and non-occupational in terms of the etiology and treatment of disease. Collins further asserted that no medical condition escapes the influence of 8 hours of daily work. Thus, as mentioned over 20 years ago in a seminal report to the to Secretary of Health, and Welfare, entitled *Work in America* (1973), work represents an institutional tool that could be effectively used to improve the health of workers and thereby reduce the massive costs of health care in the United States.

Nowhere are the rising costs of work-related chronic ill health more evident than in the area of occupational stress. California worker compensation data, for example, show a rapid increase beginning in 1981 in the rate for mental problems, whereas compensation rates for all other types of claims continued a modest decline [California Workers Compensation Institute, 1990]. Similarly, a study by the Northwestern National Life Insurance Company found that the percentage of stress-related disability cases managed by the company rose from 6% in 1982 to fully 13% in 1990 [Northwest National Life Insurance Company, 1991]. A similar phenomenon occurred for Social Security disability awards, for which awards for mental disorders are now more common than for any other type of disability, more so than awards for even circulatory problems and musculoskeletal disorders [Social Security Bulletin, 1989]. Data from a large national health interview survey conducted in 1985 revealed that one-half of the non-institutionalized U.S. population experienced "moderate" or "a lot" of stress, and an estimated 11 million workers reported that mental stress was the primary work condition that endangered their health [Shilling and Brackbill, 1987].

It follows that the control of occupational stress should be of concern to policy-makers, to the general public, and to stress researchers themselves. While there is considerable confusion (even among stress researchers) regarding the meaning of the term *stress*, occupational stress can be thought of, simply, as a situation in which characteristics of, or events related to, the workplace lead to the workers' ill

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health or welfare. These environmental job situations are often labeled *stressors*, which are thought to represent risk factors for psychological or physical ill health. The purpose of this article is to briefly examine preventive or intervention strategies for enhancing occupational mental health and averting stress-related psychological and physical ill health. In general, these intervention strategies can be roughly classified as being primary, secondary, or tertiary in nature, each having different aims [Quick et al., 1992]. The aim of primary prevention interventions is to reduce the risk factors or to change the nature of the job stressors; the aim of secondary prevention interventions to alter the ways individuals respond to risks or job stressors; and the aim of tertiary prevention interventions to heal those who have been traumatized.

PRIMARY PREVENTION INTERVENTIONS

Job redesign and organizational change represent preferred approaches to controlling job stress because they focus on reducing or eliminating the sources of the problem (generally referred to as *job stressors*) in the work environment. Research has identified a large number of job stressors over the past 20 years [for more complete information on job stressors and their relationships to health outcomes, see Cooper and Marshall, 1976; Hurrell and Murphy, 1992]. To be fully successful, however, job redesign and organizational change interventions require an accurate assessment of job stressors in an organization, which may involve substantial effort, and a knowledge of the dynamics of change processes in organizations so that potentially undesirable outcomes can be minimized. For example, organizations resist change, and this resistance is reinforced by the belief among some that the work environment does not materially contribute to employee stress. Moreover, these types of interventions can be expensive and disruptive, making them less appealing to management than secondary or tertiary intervention efforts.

Examples of primary interventions that have potential for preventing or reducing stress include: (1) developing clear job descriptions (to avoid or reduce role ambiguity and conflict); (2) redesigning of the physical work environment according to sound ergonomic principles (to reduce musculoskeletal, visual, and psychological complaints); (3) forming joint employee/management committees, such as health and safety committees (to increase worker involvement and participation in decision making); (4) making provisions for child care and elder care at the workplace (to reduce scheduling problems); (5) providing special training for workers whose jobs are being abolished or altered by downsizing or new technologies (to provide jobs within other areas of the company or outside of the company).

Three current models offer guidance for designing primary job stress interventions: the job characteristics model [Hackman and Lawler, 1971; Hackman and Oldham, 1976], the job demands–control model or worker strain [Karasek, 1979], and the person–environment (P-E) fit model [Caplan et al., 1975]. Each of these models predicts positive health and increased work performance outcomes as the amount of worker control or discretion is increased [Murphy et al., 1992]. For example, the job characteristics model of task design considers autonomy to be a core job dimension that leads to positive affect by means of experienced responsibility for work outcomes. Employee participation in decision making, which increases control (or perceived control), is a fundamental element of socio-technical systems theory and quality circles.

Similarly, control is an important feature of P-E fit theory [Caplan et al., 1975], which predicts strain (a consequence of job stress) as a function of the fit (or congruence) between objective job demands and subjective worker needs. From this theory it follows that workers with more job control can (re)structure jobs to optimize fit between job requirements and their individual needs and abilities, thereby reducing job strain.

Clearly the most explicit statement of the relationship between job control and worker health was offered by Karasek [1979]. Karasek hypothesized that psychological strain results from the joint effects of psychological job demands and the degree of worker control (decision latitude). Worker strain would be reduced as worker control is increased.

It is important to recognize that there is a need for closer theoretical and conceptual attention to the control construct [Sauter and Hurrell, 1989]. Perhaps most critical is the need to delineate the construct more clearly, paying closer attention to specific dimensions of control. At the same time, we need to guard against protracted academic debate and strike a careful balance with additional applied research, recognizing that increasing control represents a primary intervention strategy that holds considerable promise for protecting worker health. As yet, few empirical tests of the predictions from these theories have been made in work settings. A few published reports, however, have produced encouraging results demonstrating decreases in worker strain as the level of worker control over various aspects of work increased [Jackson, 1983; Karasek, 1990; Pierce and Newstrom, 1983; Wall and Clegg, 1981].

Regardless of the theoretical approach, job and organizational level interventions should be evaluated using organizationally relevant objective outcome measures in addition to employee subjective reports. Such outcomes include health care costs, absenteeism, turnover, worker performance/productivity, organizational effectiveness, disability, workers compensation costs, and accidents and injuries. Importantly, such measures can be used to calculate the effectiveness of interventions in terms of financial benefit, which has become increasingly important in the current economy.

SECONDARY AND TERTIARY INTERVENTIONS

"Stress management interventions," which generally involve efforts to help employees either modify or control their appraisal of stressful situations (secondary intervention), or cope more effectively with reactions to stressful conditions (tertiary intervention), are common in the literature [Murphy and Schoenborn, 1989]. Since the mid-1970s, a growing number of studies have evaluated the merits of prescriptive, individual-oriented, relaxation-based, stress management strategies in work settings [Murphy, 1988]. These methods have included muscle relaxation, meditation, biofeedback, and assorted cognitive strategies. These interventions are often offered as a prevention activity designed to educate employees about the relationship between stress and health, and to provide skills useful for identifying and managing symptoms of stress. Typically, these interventions offered a single stress management technique (e.g., progressive muscle relaxation) at one point in time. The benefits of training were assessed in the immediate post-training and, much less frequently, during some follow-up phase.

The success of these interventions is typically evaluated using measures of individual level outcomes, such as reports of tension, anxiety, depression, and somatic complaints, and, less frequently, with physiological measures, such as blood pressure and catecholamine levels. Studies of such interventions have clearly supported the efficacy of various types of stress management training in reducing psychophysiological and self-report signs of stress. However, the duration of these beneficial effects is quite unclear [Murphy, 1988]. Virtually no research has assessed potential collateral effects of stress management interventions. For example, if an intervention eliminates or reduces employee stress reactions, then it is reasonable to expect attendant changes in other stress-related behaviors, such as substance abuse, coping ability, and the like. Also stress interventions might have collateral effects on measures of self-esteem and general life satisfaction, which could in turn influence health and performance.

In practice, tertiary intervention programs in the workplace are far more common than primary intervention programs, with secondary intervention programs intermediate in frequency [Murphy, 1988]. Tertiary intervention programs, usually in the form of an employee assistance program (EAP), traditionally have offered counseling for alcohol-related problems. Increasingly, however, such programs are expanding their services to address other problems, such as drug abuse, violence in the workplace, and stress. Because of their access to organizations, EAPs have significant potential for reducing stress-related problems. For this potential to be realized, EAPs will need to incorporate a primary intervention component and begin to provide feedback to organizations with respect to stressful work environment factors. Feedback from an EAP in the form of summary statistics (which protect worker confidentiality) would permit organizations to pinpoint high-stress departments or areas within an organization to establish a starting point for more in-depth intervention efforts.

THE INTERVENTION PROCESS

It is important to appreciate that universal solutions to work stress are unlikely to be successful, because stress problems often require solutions that are more or less unique to each organization. The intervention process, however, may be generic and effective, regardless of the nature and type of organization. Unfortunately, studies of job stress interventions have, by in large, focused on the *what* and the *why* (i.e., the content) to the exclusion of the *how* (i.e., the process). A study by Murphy and Hurrell [1987], which described a stress intervention involving a marriage of primary and secondary intervention approaches, focused on the process. In this study, a worker–management "stress reduction committee" was established, containing representatives from various units of the organization. The committee, with the help of outside experts, developed an employee survey using feedback obtained from workers during a stress management workshop. The stressors identified in the survey were then reviewed and prioritized by the committee, according to perceived relevance and importance to employee health and well-being, and susceptibility to primary intervention. Organizational changes to eliminate or reduce high-priority stressors, then, were formulated and presented to management with recommendations for their implementation and evaluation at annual intervals. This approach resembles participatory action research [Whythe, 1991] and may serve as a useful prototype for stress interventions. The involvement of workers or worker groups in all phases of the intervention process is clearly necessary to ensure successful and longlasting interventions.

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