

CHAPTER 3

A REVIEW OF ORGANIZATIONAL STRESS ASSESSMENT INSTRUMENTS

John W. Jones and David DuBois

Legal researchers are concluding that managers can no longer choose to recognize and deal with the sources and symptoms of stress on the job — it has become a legal obligation (Ivancevich, Matteson, and Richards, 1985). Organizational stress surveys can be used to provide management with information on both the levels and sources of employee stress. Stress surveys that can be employed in organizational settings are reviewed in this chapter.

THE COST OF OCCUPATIONAL STRESS

Stress is a costly business expense, affecting both employee health and company profits. However, companies can reduce stress and its effects through comprehensive work site stress management programs.

Consider these stress facts gleaned from various safety and insurance industry research (Jones, 1985):

- o In 1982, the total cost of work-related accidents in the U.S. alone was \$32 billion.
- o The causes of about 75–85 percent of all industrial accidents are accident susceptibility factors (e.g., fatigue, poor concentration, inattentiveness).
- o Psychological or psychosomatic problems contribute to over 60 percent of long-term employee disability cases.
- o About 11 percent of all occupational disease claims are for workplace stress.

With regard to the last statistic, three forms of work stress claims have been delineated (National Council on Compensation Insurance, 1985). A physical-mental claim occurs when a physical injury results in a mental disability, such as a phobic fear of heights after falling from a scaffold and breaking a leg. Mental-physical claims happen if mental stress results in a physical injury, such as when constant deadline pressures, coupled with overwork, culminates in a heart attack. Lastly, mental-mental claims occur when mental stress causes mental disability. An example would be sexual harassment that leads an office worker to have anxiety attacks.

Legal suits for job-related stress likely will increase in the future because:

1. Research suggests a relationship between stress and injury/illness.
2. Many state workers' compensation laws specify compensation for injuries, both physical and mental, resulting from job stress.

3. More employees are prompted to file stress claims because they believe in the stress-loss connection and know that fellow employees have received workers' compensation for it.
4. Finally, lawyers, judges and physicians are becoming more familiar with this type of claim. It is more easily diagnosed and more often used to receive legal and monetary restitution.

Hence, it becomes imperative that companies begin to understand, assess, and remedy excessive levels of occupational stress.

But what is stress? By definition, stress is the adverse emotional and physical reactions employees have to any source of pressure in their environment. These stress reactions negatively affect personal health and organizational effectiveness and often create losses (see Table 3.1).

TABLE 3.1 THE PERSONAL AND ORGANIZATIONAL EFFECTS OF OCCUPATIONAL STRESSES

Personal

Alcohol abuse	Anxiety
Drug abuse	Psychosomatic diseases
Emotional instability	Eating disorders
Lack of self-control	Boredom
Fatigue	Mental illness
Marital problems	Suicide
Depression	Health breakdowns
Insomnia	(cardiovascular, etc.)
Insecurity	Irresponsibility
Frustration	Violence

Organizational

Accidents	Inflated health-care costs
Thefts	Unpreparedness
Reduced productivity	Lack of creativity
High turnover	Increased sick leave
Increased errors	Premature retirement
Absenteeism	Organizational breakdown
Disability payments	Disloyalty
Sabotage	Job dissatisfaction
Damage and waste	Poor decisions
Replacement costs	Antagonistic group action

Employees continually confront various pressures or "stressors." They experience stress if unable to effectively cope with such stressors as poor management, lack of job security, work overload, unclear communications, excessive deadline pressure, unrealistic expectations, insufficient pay, and uncertainty about job duties and responsibilities.

BREAKING THE DISTRESS CYCLE

The major goal of work site stress management programs is to help companies interrupt what is called the distress cycle. Diagram A illustrates how this damaging cycle evolves. Research by the St. Paul Insurance Company has shown that there are two basic approaches to breaking the distress cycle. One is to identify and to modify the stressors. The other is to increase an employee's ability to cope with stress. Both methods can be used individually or in combination.

For example, organizational stressors can be identified and corrected. Consider one production unit with a very high stress level, a high number of accidents, and low productivity. Results of an organizational stress survey showed that poorly defined job responsibilities caused stress in the unit members. After each person's job was analyzed and defined, production increased and accidents were reduced. The stress survey also revealed other stressors which needed controlling, including poor communications, undefined pay raise systems, and employee drug abuse (Jones, 1985).

The second way to break the distress cycle -- increasing the ability to cope -- consists of the more commonly known stress management techniques. These include physical fitness programs, relaxation techniques, assertiveness training, biofeedback, weight loss, drug and/or alcohol rehabilitation, and periodic physical examinations. These techniques are not intended to alter stressors, but to increase an individual's ability to cope with stressors in his/her environment.

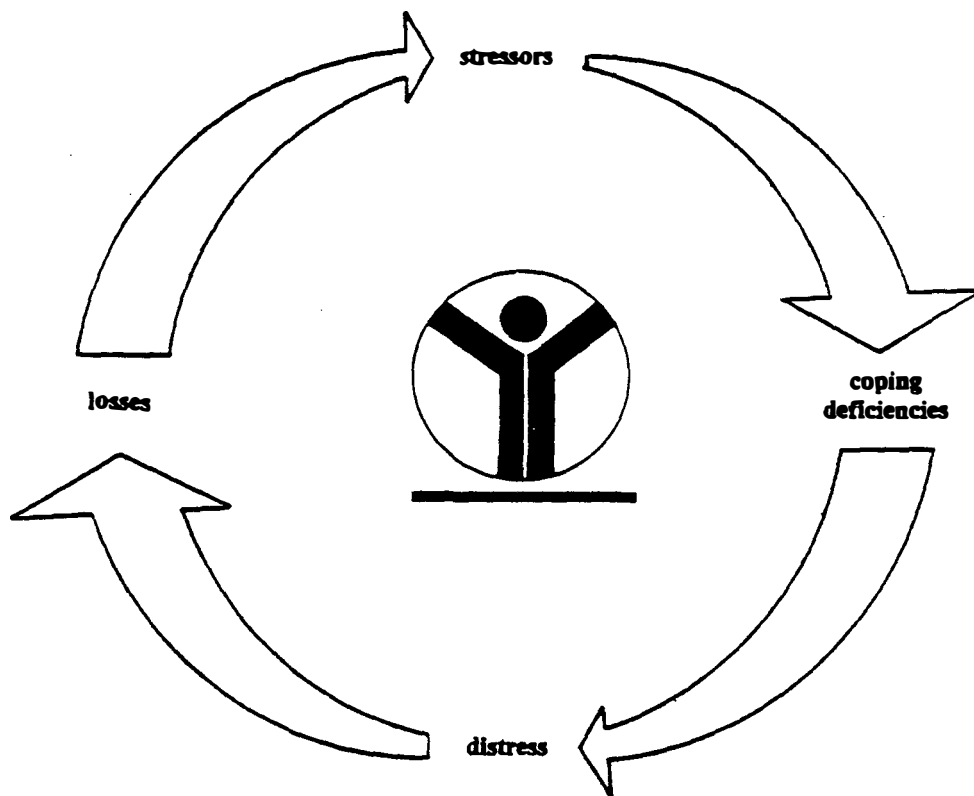
THE ASSESSMENT OF ORGANIZATIONAL STRESS

To better control stress-related losses in industry, companies must periodically use organizational stress surveys which assess: (1) Employees' physical, mental, and emotional reactions to a stressful work environment; (2) the corporate stressors which cause stressful, pressured work environments; and (3) the corporate, and employee, coping skills and resources that can serve as "stress buffers."

Research at The St. Paul Insurance Company (Burdick and Jones, 1985) indicates that companies are more likely to implement work site stress management programs once they learn, through an organizational stress assessment, that their employees are indeed experiencing exceptionally high levels of occupational stress. Ideally, the stress assessment

The Distress Cycle

Employees are exposed to many stressors. Those who have coping deficiencies rather than coping skills become distressed. Chronic distress, in turn, leads to social and financial costs — accidents, injuries, turnover and poor productivity. But it doesn't stop there. These symptoms of distress become, themselves, stressors, and the distress cycle develops.



can pinpoint the overall level of company stress, levels of stress in selected work groups (e.g., departments, job types), and the major organizational stressors that are causing the employee stress.

The major purpose of this chapter is to review organizational stress assessment instruments that can be employed in business settings. The review is not intended to be comprehensive. Instead, this chapter focuses on a few key stress inventories that were specifically designed for work settings and that have ample evidence of validity. In addition, all of the instruments reviewed have been successfully tested in a wide variety of companies.

This review is geared toward practitioners who want to gain a better perspective on how to select, administer, score and interpret organizational stress surveys. Four different assessment tools are reviewed.

I. HUMAN FACTORS INVENTORY (HFI)

The Human Factors Inventory (HFI) is a 162-item organizational climate survey (Jones, 1983; Jones and DuBois, 1985). The HFI is used by businesses to assess various forms of occupational stress.

The HFI has the following six scales: Job Stress, Job Dissatisfaction, Organizational Stress, Stressful Life Events, Life and Health Risks, and Accident Risks. Test-retest reliability coefficients (one-week interval) for these six scales are .91, .90, .89, .89, .88, and .87, respectively. Each of these scales is briefly described below. In addition, two speciality scales -- the Technostress Scale and the Distortion Scale -- are also briefly described below. Norms exist based on over 100,000 employees representing hundreds of different companies and job types.

Job Stress. This scale identifies the average level of job stress that employees are experiencing at an individual level. General signs of job stress include feelings of frustration, boredom, irritability, nervousness and "burn-out" at work. Physical signs of job stress include headaches, stomach upset, backaches, chest pains, chronic fatigue, and sleep difficulties. Employees who score in the higher risk ranges are also less productive, they have higher rates of illness and absenteeism, and they often think about leaving the company. Finally, they feel that work-related pressure contributes to tension in their family. Sample items include: "I experience too much pressure on my job."; "I have lost efficiency on my job."; and "I feel burned out on my job."

Job Dissatisfaction. This scale assesses how dissatisfied employees are with various aspects of their job. Dissatisfaction with the following areas is assessed: Job, pay, promotional opportunities, co-worker relationships and overall management

effectiveness. Sample items include: "I am very satisfied with my job."; "This company is well managed."; "I am paid adequately for what I do."; and "We have a good team relationship in my department."

Organizational Stress. This scale assesses employees' perceptions of organizational stress. This scale identifies whether departments have unacceptable levels of organizational tension. Some general signs of organizational stress that are measured by this scale include poor productivity, interpersonal conflicts, departmental tension, excessive absenteeism, accidents and mistakes, and a perception that employees are distressed. Employee dishonesty, waste and on-the-job alcohol and drug misuse are also assessed. Sample items include: "My department is understaffed."; "There is more absenteeism and tardiness in my department than usual."; and "Staff turnover is high in my department."

Stressful Life Changes. This scale measures the amount of stressful life changes that employees have experienced in the past 12 months. Examples of stressful life changes that are assessed include taking on debts; an illness, injury, or death of a loved one; and major changes in job duties at work. This scale provides a measure of personal stress. Most companies request a stress survey that can differentiate between job stress and personal stress.

Life and Health Risks. This scale measures lifestyles and health habits that increase the risk for unnecessary injuries, illnesses, and premature deaths among employees. Examples of such risks include lack of exercise and relaxation, unsafe driving practices, poor nutrition and weight control, smoking, alcohol abuse, and so on. Sample items include: "I get a thorough physical examination each year."; "I try to prevent work stress by exercising and participating in recreational activities."; and "I get approximately eight hours sleep at least four nights a week."

Accident Risks. This scale measures four human factors that contribute to accidents and errors. The four factors are: (1) An inability to cope with stress; (2) Poor safety attitudes; (3) A tendency to worry about job performance, and (4) An inability to manage time. Sample items include: "Are you always safety conscious?"; "Do you feel hurried or rushed to complete deadlines at work?"; and "Do you feel fatigued during the workday."

Technostress. Countless employees have claimed that working with Video Display Terminals (VDTs) is an adverse experience. Many employees are wary of the potential health hazards of VDTs. This wariness leads to unnecessary stress. This scale measures how much "technostress" is experienced by employees who work with

VDTs. Some specific signs of technostress include headaches from VDT use, fear of radiation exposure, eye irritation and fatigue, muscle aches and pains, and emotional discomfort and stress. (Employees who do not use VDTs are excluded from any analysis with this scale.) Sample items include: "Do you get headaches from VDT use?"; "Do your eyes become irritated and fatigued from VDT use?"; and "Does working on a VDT cause you any emotional discomfort or stress?"

Distortion. This scale identifies the percentage of employees who are truthful with their responses. It identifies the number of employees who attempt to "fake good" or "fake bad" on the Human Factors Inventory.

Interpreting HFI Scale Scores

The HFI takes approximately 30 minutes to complete. It is given to all company employees. Participation is both anonymous and voluntary. The HFI survey results are then computer scored and compared to the national norm. An organizational "stress quotient" is computed for each company. This comparison allows companies to determine if their employees are above or below a national average in terms of their stress reactions and coping skills. The inventory also indicates in which jobs or departments employees are experiencing the most stress.

The major findings of the Human Factors Inventory are derived from analyzing the survey data on three levels: 1) Overall results for each scale for all company employees combined; 2) analyses by employee subgroups (e.g., job titles, departments, locations, demographic variables); and 3) response frequencies for individual items. HFI percentile scores ranging from 0 to 100 are plotted for each subscale. Higher scores mean greater risk. The following guidelines are used when interpreting all subscales:

Percentile Description Range

0 - 20%

Very Low Risk. The average employee is coping better than 80% or more of the employees represented in the norms. This is probably due to better coping skills and less exposure to stressful situations.

21 - 40%

Low Risk. The typical employee is coping better than 60 to 79% of the employees in the normative sample.

41 - 60%

Average Risk. The average employee is coping just as well as the average employee represented in the norms. The typical employee in this group is no worse or no better than the typical employee from the normative sample. That is, scores in this range mean that employees have both coping skills and coping deficiencies.

61 - 80%

High Risk. Scores in this range mean that there are opportunities to reduce stressors and improve coping skills. That is, the typical employee is coping worse than 61 to 80% of the normative sample employees. Interventions are needed for these employee groups.

81 - 100%

Very High Risk. Active interventions are definitely needed for these employee groups. The average employee is coping worse than 81 - 100% of the employees represented in the norms. This is probably due to poorer coping skills and more exposure to stressful situations.

In brief, work groups with percentile scores greater than 50 are experiencing above average levels of stress. Groups with percentile scores less than 50 are experiencing below average levels of stress. A score of 60 or more indicates critically higher levels of stress and should serve as a warning to companies that worksite stress management programs are definitely needed.

Validity

A test or survey is valid when it predicts those behaviors and outcomes that it was designed to predict. A number of validation studies have been conducted with the HFI (Jones and DuBois, 1985). A selection of five of these are presented briefly below.

In one study, 150 employed college students completed the HFI and made anonymous admissions of accidents, injuries and illnesses. Results showed that higher scores on the HFI (higher scores mean more stress and poorer coping skills) significantly correlated ($p < .05$) with higher rates of on-the-job accidents, minor injuries, major injuries, minor illnesses, major illnesses, and days of work missed due to injury and/or illness. Higher HFI scores were also associated with more frequent use of medical facilities. Finally, higher HFI scores were associated with poorer productivity and tendencies to look for a new job. This study was replicated with over 6,000 employees who represented hundreds of different job titles.

Forty-two employees who reported on-the-job injuries to an occupational nurse participated in another validity study. All employees worked for the same company. Reported injuries typically

fell into one of four categories: Falls and trips, lifting strains, lacerations, and miscellaneous (e.g., smashed finger, infection of unknown origin, hematoma from dropping cabinet on foot, etc.). All injuries required medical care and time off from work. All of these occupationally-injured employees completed the HFI to further test the hypothesis that employees who get injured at work experience more job stress and dissatisfaction than their co-workers.

Obtained results supported the hypothesis. Statistical analyses showed that the injured employees, on the average, experienced higher levels of job stress, job dissatisfaction, and organizational stress compared to a control group of over 1,000 co-workers ($p < .01$). In addition, the injured employees encountered more stressful life changes during the past 12 months compared to the control group ($p < .01$). These findings support the hypothesis that employee stress is related to more on-the-job accidents and injuries.

A second part of this study examined the stress levels of a group of workers who engage in a high level of wellness behaviors. From the theory of stress, it is expected that employees who engage in the regular use of stress management techniques and maintain healthy lifestyles (i.e., regular exercise, good nutrition, strong social support network, etc.) will be more resistant or hardy when exposed to normal or high levels of stressors.

To assess the sensitivity of the HFI to measure groups with high levels of wellness behaviors and expected low levels of distress, 80 practitioners of the Transcendental Meditation Program were surveyed with the HFI and compared both with the norm group and with the injured employees. As expected, the meditating group displayed significantly lower levels of job and organizational stress than either the norm group or the injured workers ($p < .01$).

Also, their scores on the Accident Risks, Job Dissatisfaction, and Life and Health Risks scales were significantly lower than the other groups ($p < .01$ in all cases). The scores on the Stressful Life Changes scale showed no significant differences, indicating that the level of life stressors were similar. The lower levels of stress reactivities measured by the Job and Organizational Stress scales can be presumed to be due to the increased level of stress coping skills rather than a lower level of stressors.

The relationship between HFI scores and levels of chronic back pain was assessed with 518 hospital employees in another validity study. Employees indicated how often they experience distressing backaches and pains. Back pain and injury is a leading cause of workers' compensation claims. Obtained results show that approximately 21% of all employees experience high rates of backaches and pains. Only 13% of employees reported that they "never" experienced back pain (see Table 3.2).

Table 3.2. Relationship Between HFI Scores and Chronic Back Pain.

<u>Pain Frequency</u>	<u>Sample Size</u>	<u>Percent of Total</u>
Never	69	13.3%
Rarely	181	34.9%
Sometimes	161	31.1%
Often	83	16.0%
Always	24	4.6%
 TOTAL	 518	 100.0%

The relationship of HFI job stress scores to frequency of back pain is presented in Table 3.2. A very strong relationship between stress and backpain is documented. That is, employees who report higher levels of job stress also report significantly more back pain. In fact, the employees (N = 24) who report that they "always" experience back pain also suffer from critically high levels of job stress (i.e., Job Stress = 90th percentile).

Finally, the HFI was administered in 17 hospitals. Stress scores were compared to a number of hospital loss indices. Statistically significant results ($p < .05$ in all cases) showed that hospital departments that had higher stress levels had higher rates of turnover, employee injuries, worker's compensation claims, and risk for medical malpractice compared to the hospital departments with lower stress. In addition, a very strong relationship was obtained between HFI stress scores and frequency of back pain, thus replicating Study Four.

The results of these validity studies indicate that companies that use the HFI to assess corporate stress can be assured that higher HFI scores indicate a higher risk for loss due to accidents, injuries, illnesses, medical claims, poor productivity, turnover, and acts of negligence. Stress management training, at both the level of the individual employee and the organization, should lead to lower rates of stress-related accidents and losses.

Case Study

This case study describes how the HFI was used to control losses in the hospital industry. Approximately 1,500 employees from a southeastern hospital anonymously completed the HFI on company time. These employees represented over 40 hospital departments. Analyses revealed that three clinical medicine departments (e.g., surgical nursing, anesthesia, and pharmacy) exhibited critically high levels of stress on the HFI Job Stress, Job Dissatisfaction, and Organizational Stress scales. Analysis of these departments' insurance loss statistics revealed that a number of malpractice claims ranging from

\$50,000 to over \$100,000 had recently been filed. Item analyses of the HFI stress scales helped to identify a number of organizational stressors (e.g., poor communications, ineffective management, understaffing) that the hospital administration was willing to correct now that a connection between high departmental stress and risk for medical malpractice was established. Moreover, the hospital administrators admitted that they were "suspicious" about these high risk departments, yet they did not know where to begin to remedy the situation. Administration was now receptive to a number of different work site stress management programs.

Another finding showed that employees in the general services department at the hospital (i.e., housekeeping, laundry, maintenance) had extremely high personal stress scores, as measured by the HFI Stressful Life Changes scale. This same department also had nearly \$100,000 in workers' compensation losses for the year preceding the stress assessment. This finding prompted the hospital to implement an Employee Assistance Program (EAP) that provides opportunities for professional counseling to chronically distressed employees and their families. This case study documents how the HFI can be used in a hospital setting to control losses. A summary of some of the other ways in which the HFI has been used in industry is provided below:

1. Focus Efforts. Employee groups at greatest risk of having stress-related accidents, injuries, or illnesses are identified. Some possible solutions to their situation are provided. Companies can then direct their training and development dollars to where the need is greatest.
2. Pinpoint Strengths and Weaknesses. Companies get a clear picture of how well the employees and managers are coping with stress compared to a national norm group. Companies can determine whether certain jobs or departments experience more or less stress than others. They can see if important human factors, such as job stress and employee wellness, cause their employees to be more susceptible to accidents, illness, poor productivity, and premature death.
3. Create Awareness. Just by administering the HFI, employees feel management is interested in improving the quality of their work life. In turn, employees become more motivated to manage stress and seek wellness in their lives.
4. Employee Involvement. The HFI opens up an invaluable communication channel between all levels of employees and management. Such employee involvement leads to improved morale, especially when employees see that their input helped to facilitate the implementation of work site stress management training programs.

5. Evaluate Progress. Results presented in one year's HFI profile can be compared with the results of future employee profiles to develop a clear measurement of progress. Study after study indicates that a reduction in employee and corporate stress, followed by an increase in both job satisfaction and employee wellness, should lead to a decrease in the following areas: Medical claims and accidents, illness, turnover and absenteeism, theft, sabotage, and poor productivity. Such decreases should be reflected in improved employee morale, better organizational efficiency, and higher corporate gains.
6. Prevention. Finally, the HFI can be used to identify potential stress-related loss areas before they cause any significant level of loss.

II. WORK ENVIRONMENT SCALE (WES)

Dr. Rudolf Moos developed the Work Environment Scale in order to assess the quality of worklife and stress levels in many types of work units. The WES is described in depth elsewhere (e.g., Moos, 1981). Some key features of this organizational climate survey are described below.

The standard WES consists of 90 items that make up 10 subscales. Normative data have been collected for over 1,400 employees from general work groups and over 1,600 employees from a variety of health care work groups. Test-retest reliability coefficients (one month interval) are all in an acceptable range, varying from a low of .69 to a high of .83, depending on the subscale.

WES Subscales

The 10 WES subscales assess 3 underlying dimensions of organizational functioning: The Relationships dimension, the Personal Growth dimension, and the System Maintenance and System Change dimensions. The subscales that comprise each dimension are described in Table 3.3.

Inspection of Table 3.3 reveals that the WES subscales can be used to assess organizational stress levels and major organizational stressors. For example, the Work Pressure subscale assesses the experience of workplace stress and tension. Examples of items on this subscale include: "There is constant pressure to keep working."; "People cannot afford to relax."; "It is very hard to keep up with your work load."; "There always seems to be an urgency about everything." The Involvement subscale is also an excellent measure of

TABLE 3.3.—WES Subscales and Dimensions Descriptions

RELATIONSHIP DIMENSIONS

1. Involvement - the extent to which employees are concerned about and committed to their jobs
2. Peer Cohesion - the extent to which employees are friendly and supportive of one another
3. Supervisor Support - the extent to which management is supportive of employees and encourages employees to be supportive of one another

PERSONAL GROWTH DIMENSIONS

4. Autonomy - the extent to which employees are encouraged to be self-sufficient and to make their own decisions.
5. Task Orientation - the degree of emphasis on good planning, efficiency, and getting the job done.
6. Work Pressure - the degree to which the press of work and time urgency dominate the job milieu

SYSTEM MAINTENANCE AND SYSTEM CHANGE DIMENSIONS

7. Clarity - the extent to which employees know what to expect in their daily routine and how explicitly rules and policies are communicated
8. Control - the extent to which management uses rules and pressures to keep employees under control
9. Innovation - the degree of emphasis on variety, change, and new approaches
10. Physical Comfort - the extent to which the physical surroundings contribute to a pleasant work environment.

employee stress. This subscale determines if employees are concerned about and committed to their jobs (low stress) or if workers are apathetic about and uncommitted to their jobs (high stress). Examples of items on this subscale include: "There's not much group spirit; A lot of people seem to be just putting in time; It's hard to get people to do any extra work; Few people ever volunteer."

The WES also can be used to assess organizational stressors and stress buffers. For example, management can be considered a stress buffer if favorable scores are obtained on the Supervisor Support subscale, and as a stressor if unfavorable scores are obtained on this subscale. Similar interpretations can be made with the Peer Cohesion, Task Orientation, Clarity, Control, and Physical Comfort subscales.

Validity

Moos (1981) reviews a number of validity studies conducted on the WES. Holahan and Moos (1981 a, b) found that a number of WES subscales were related to complaints of depression and psychosomatic symptoms in a representative sample of men and women workers. Brady, Kinnaird, and Friedrich (1980) found a relationship between perceived work environment, as measured by the WES, and job satisfaction among staff members of a mental health center. More specifically, employees who saw their work settings as more oriented toward involvement, cohesion, support, autonomy, and innovation showed greater satisfaction with their jobs.

Wetzel (1976, 1978) found that WES scores were associated with clinical measures of depression. Moos (1981) reviewed a number of studies (e.g., Bromet and Moos, 1977) that related WES scores to recovery rates among working alcoholics. Relapsed alcoholics had lower scores (i.e., more stress) on both the Work Pressure and the Physical Comfort subscales than the recovered patients.

Case Study

There are a number of practical applications for the WES as described by Moos (1981). A major use is to compare various subgroups of employees in order to assess their stress levels and determine some of the possible sources of their stress.

In this case study, the WES profile of 35 staff members in a residential care setting for older people (Work Group A) was compared to the profile of 42 staff members in a community mental health center (Work Group B). Work Group A was known to be relatively satisfied with their jobs, as evidenced by turnover rates that were much lower than that of other long-term care settings. Work Group B was known to have a morale problem.

Analysis of WES profiles revealed that Work Group A differed from Work Group B on a number of different dimensions. Work Group A, the low stress staff, felt committed to their jobs, were friendly and supportive of one another, and thought that the facility management was supportive and helpful. Group A staff felt that there was a strong emphasis on good planning and efficiency and little work pressure. The Group A staff reported that they knew what to expect in their daily routine and that rules and policies were clearly communicated. Finally, this staff perceived a better than average degree of autonomy and self-sufficiency in their jobs, and they reported that their facility was above average in physical attractiveness and convenience.

Conversely, the staff members in Work Group B perceived a significantly different work environment as revealed by the WES. They reported low involvement, poor communications, and a lack of peer cohesion and supervisor support. This staff perceived an emphasis on autonomy and self-sufficiency, yet Work Pressure scores revealed excessive pressure to keep up with an ever-increasing workload. Furthermore, the staff perceived their workplace as being poorly organized and inefficient, and they were unclear about expectations, rules, and procedures. Comparing and contrasting the WES profiles in this case study indicates that improving the work environment of Work Group B may be an effective first step toward improving employee morale.

III. MASLACH BURNOUT INVENTORY (MBI)

The Maslach Burnout Inventory (MBI) measures staff "burnout," a syndrome of emotional exhaustion and cynicism that occurs frequently among chronically distressed "people workers" (Maslach, 1982). Hence, the MBI is appropriate for use with police officers, counselors, teachers, nurses, social workers, psychiatrists, psychologists, attorneys, physicians, and agency administrators. The MBI is thoroughly described elsewhere (e.g., Maslach and Jackson, 1981).

The MBI consists of three regular subscales and a fourth optional subscale. The four subscales are:

1. The 9-item Emotional Exhaustion subscale (e.g., "I feel emotionally drained from my work.");
2. The 5-item Depersonalization subscale (e.g., "I feel I treat some recipients as if they were impersonal 'objects'.");
3. The 8-item Personal Accomplishment subscale (e.g., "I feel I'm positively influencing other people's lives through my work.");
4. The 3-item, optional, Personal Involvement subscale (e.g., "I feel I'm personally involved with my recipients' problems.")

These four subscales are scored separately. They have been proven highly reliable and have been validated against numerous criteria

under a variety of validation strategies (Maslach and Jackson, 1981). For instance, Barad (1979) found that larger caseloads were significantly correlated with more intense feeling of burnout among Social Security employees.

Case Studies

The MBI was administered to 130 police families in order to better understand the impact of job stress on family life (Maslach and Jackson, 1979). Both police officers and their spouses completed the MBI. Analyses showed that high burnout scores were associated with more domestic strain. The ability to link job stress to marital problems provided the justification to implement a variety of work site stress management programs.

The MBI was also given to 83 child care workers in order to understand some of the sources of job stress (Maslach and Pines, 1977). Results showed that higher burnout scores were related to higher staff-child ratios and longer hours of direct contact with children. Conversely, lower burnout scores were associated with the use of relaxation breaks, regular staff meetings, and good team relationships. Hence, the MBI was used to identify major stressors and stress "buffers," respectively. Corrective steps were then taken to eliminate the organizational stressors.

IV. ORGANIZATIONAL MANAGEMENT SURVEY (OMS)

The Organizational Management Survey (OMS) is a 43-item instrument designed to identify a variety of organizational stressors in the workplace (Jones, 1984). The OMS is used by companies to identify the most prevalent organizational stressors that exist in a work group. Management can use the OMS in order to reduce or eliminate stressful job elements. Unlike the three previous stress surveys, the OMS yields item scores, not scale scores.

The OMS is typically not given to all employees within a work organization. Organizational stress surveys like the HFI, WES, and MBI are given first. These comprehensive measures of occupational stress can then be used to identify highly stressed work groups within companies. The OMS can then be used to identify the exact type of organizational stressors that are operative within the distressed work groups. An example of this strategy is presented in the following case study.

Case Study

The HFI was administered within a large hospital to over 800 employees representing approximately 30 departments. The HFI scores identified the Surgical Nursing Department as being one of the most stressed clinical medicine departments in the hospital. The OMS was given to

this nursing group in order to get a finer understanding of the organizational stressors that were impacting this group.

Eighteen nurses completed the OMS. The following stressors were identified: (1) Nurses were overworked and responsible for too many tasks; (2) poor communication existed between this work group and the other work units in the hospital; (3) nurses were chronically worried about job security; (4) unsafe equipment was being used; and (5) management talked down to employees, failed to give sufficient feedback, and did not compliment employees who did their jobs well. The data from the OMS supported the initial results from the HFI. It was also discovered that this high risk nursing department was engaging in a number of acts of negligence within the hospital that could eventually lead to a medical malpractice loss. Hospital administration studied the OMS results and quickly set out to correct the organizational stressors that were identified.

V. INDIRECT MEASURES

Some companies might not have access to organizational stress surveys for a number of reasons, one being financial. For these companies, there are a number of indirect measures of stress that can be used to identify high risk work groups.

Insurance claims data are often related to organizational stress (Jones and DuBois, 1985). Companies can analyze workers' compensation costs, medical costs, and the frequency and severity of accidents in order to determine if there are more losses than usual or more losses compared to similar types of companies. Other indirect measures include turnover and productivity data. Ideally, this data can be analyzed across time and by different work groups in order to identify an aberrant pattern of losses that can be linked back to job stress. Corrective actions could then be taken.

CONCLUSION

This chapter described a number of instruments that can be used to assess organizational stress. These instruments are cost-efficient, brief, and can be used in nearly any type of work setting. They can be administered and scored by nonprofessional personnel, who, with a bit of training, can also deliver basic interpretive information to key decision makers within a company.

Other stress inventories like the Stress Map (Jaffe and Scott, 1985), the Stress Audit (Miller and Smith, 1983) and the Stress Management Questionnaire (Peterson and Lawrence, 1983) exist, but too little validity data has accumulated to warrant detailed descriptions in this chapter. By the same token, inventories like the Job Descriptive Index (Smith, Kendall, and Hulin, 1969) have a proven track record,

yet their focus is on employee satisfaction, not organizational stress. Still other instruments, like the ones developed by the Institute for Social Research at the University of Michigan (Caplan, Cobb, French, Van Harrison, and Pinneau, 1975) and used in many studies of occupational stress, do not lend themselves to use by those unfamiliar with psychometric theory.

The purpose of this chapter was to describe a few key stress inventories that are valid and have a history of successful business applications. Readers must be warned that accurately assessing employees' stress reactions and organizational stressors is the first step in controlling stress-related losses. The critical step is the implementation of a comprehensive work site stress management program to control or actually prevent stress-related losses. Such a program should teach management how to correct organizational stressors, and employees how to improve their stress coping skills.

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EDITORS

Lawrence R. Murphy

**Applied Psychology and Ergonomics Branch
Division of Biomedical and Behavioral Science**

and

Theodore F. Schoenborn

**Technical Information Branch
Division of Standards Development and Technology Transfer**

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
National Institute for Occupational Safety and Health**

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