Stress as a Compensable Factor in Job Evaluation

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Together with such factors as training required, degree of initiative, responsibility for product or service, supervision of others, safety, working conditions and other considerations weighed in the evaluation of jobs, is the possibility of assessing relative job stress. But we seldom see stress per se considered in the design of job evaluation plans. There have been myriad conceptual and measurement problems involved in explicating what stress is. Thus stress has not been ignored in the social sciences and business. Moreover, it is possible to build ad hoc job stress scales; and there is good reason for companies and agencies to experiment with them. A way of exploration and measurement of perceived stress in the job is proposed and suggested as a worthwhile beginning for interested scholars, companies, agencies, and other work organizations. Such endeavors would also generate studies of individual job performance in organizations and their connection with occupational stress research.

Introduction

For about three decades stress has been a buzzword in the world of management. Interest in such concepts as stress, stress management, and burnout prevention has grown greatly in this time. Seminars, classes, self-help books, and empirical studies of stress have meanwhile burgeoned. Nevertheless, the word stress is still often used in everyday life with little consistent or agreed understanding by many managers, employees, and other individuals in society. People at work are regularly viewed as experiencing great stress. Sometimes such persons are thought to be capable of avoiding stress and would not have it except for their jobs, the surrounding working conditions, and the duties entailed in the jobs.

In the most comprehensive study of the 1990s on stress and job performance, which reviews many theories—a monumental amount of pertinent research and consideration of the implications of all this for managerial practice—Jex (1998) asks why has job performance been neglected in occupational stress research? First, job performance is a very complex variable and difficult to measure accurately. Second, the processes by which stressful job conditions affect job performance are also complex and not easy to understand. Third, researchers have tended to focus on outcomes that have the greatest direct impact on the functioning of individual employees such as moods of depression, resort to substance abuse, and health problems and have devoted less attention to outcomes that have a more direct effect on work organizations, such as diminished employee on-the-job performance (Jex, 1998).

There is no doubt that for most people job performance has a high degree of personal relevance. We know lower levels of job performance may lead to lower levels of self-confidence and self-esteem (Bandura, 1997; Brockner, 1988). In addition, we can justifiably hypothesize that to the extent that job stressors depress job performance and ultimately organizational productivity this may indirectly lead to events in employment that have a very negative impact on individual employees (such as unsustainable work overloads, breakdowns, and terminations).

Very little attention has apparently ever been given to including stress per se as a compensable factor (i.e., a variable) in job evaluation plans. If stress is present in varying degrees in many jobs, should not an incumbent of a particular job expect to be paid to some
extent on acceptance and proper self-management of the stress involved in the conduct of that work? One’s on-the-job performance would thus be at least partly a reflection of adequate coping with ostensible stress and obtaining organizationally expected adequate job results. Known and/or estimated levels of human stress would become a part of the listed compensable factors in the job evaluation plan. An employee’s performance appraisal could, in turn, reflect an assessment of how a particular employee carried out assigned work in reference to that factor much as he or she did in relation to responsibility for product or quality; responsibility for tools, machines, and equipment; initiative required; mental effort; physical effort or any other of a dozen possible compensable factors utilized in a given job evaluation plan.

No evidence has been found in the management literature that companies have ever considered giving workers extra pay for stress as a matter of course. If such were done management might correspondingly be giving itself an incentive to reduce stress on the job because it would make business sense. Supplements to base remuneration (such as hazardous duty pay and premiums to undertake overseas assignments) have been utilized quite regularly in American business. Thus a stress supplement is hardly unthinkable, although managements might recoil at the concept much as they do when required to pay monetary awards to employees who through successful litigation obtain stress – caused cash payouts under state worker’s compensation laws. Put another way, states have already agreed that stress can arise out of or in the course of employment and must be lawfully paid to the stress injured regardless of what managements might want or prefer.

Background

Perhaps the main reason stress per se has never become a compensable factor in job evaluation plans is related to the dispute that has raged over the years as to whether stress truly is “in” the job or instead should be properly conceptualized as being “in” the individual. For example, anecdotal evidence can be suggested to confirm that the job of air traffic controller at O’Hare International Airport in Chicago at 4 p.m. on a Friday during a December snowstorm is much more stressful than that of an air traffic controller at the Portland, Maine Airport on a beautiful Saturday afternoon in May. Does not this prove in some loose but persuasive way that in the same occupation, air traffic controller, the O’Hare job is more stressful in terms of duties than that of the Portland air traffic controller?

Arguably, the anecdote proves nothing. A closer look at the Chicago job that day among the air traffic controllers at work during the blizzard might show some controllers were outwardly showing signs of stress and when asked reported in-body experiences of stress: feeling hyped up, nauseous, headachy, fatigued, and the like. Yet other air traffic controllers at O’Hare doing the same job probably looked calm and attentive and inwardly experienced (and would, if asked, report) confidence, professional competence in respect to managing the job, and exhilaration and delight in dealing with the challenge. They might report that they did not feel and show any “classical” signs of stress. Perhaps this apparent self-control over stress might change or be heightened if their supervisor had a frenetic management style rather than one of going with the flow in a calm manner.

To round out the argument, we can envisage a stressed out air traffic controller in Portland on the beautiful day in May who overdosed on products with caffeine and overate to while away the time on the shift and felt inside great stress because he/she was bored, angry about working that day instead of being home or enjoying recreation outside, and fighting to stay attentive to the safety and air-spacing of the sporadic flights leaving and arriving at the airport. The employee felt stress which increased as the day dragged along and he periodically had to overcome reveries and attention drifts in order to perform what some might call an easy job.
Yet the work that day could have been considered a piece of cake by many experienced air traffic controllers.

There are other reasons why specialists in job evaluation have not given much attention to stress as a compensable factor. For one, adding new factors to prototype job evaluation plans has not been very much in vogue because respect for the value and adequacy of job evaluation has been challenged and may be in decline (Emerson, 1991; Smith et al., 1990; Dufautel, 1991; Lawler, 1971.) As a tool for human resource management job evaluation has always appeared primitive, subjective, and judgmental (Jaques, 1961). There is less interest among serious professionals in the job evaluation field seemingly in trying to make job evaluation work better than in finding a conceptual and practical substitute for it, something that is more objective and scientifically acceptable. Some researchers have, in fact, devised useful new approaches (McCormick, 1985; Jeanneret, 1986). Lastly, in any event there are many questions about how stress can be defined in a generally accepted way and further subdivided into meaningful points on a scale of measurement or assessment for the purposes of meaningful job evaluation.

There are a few well-known clinical stress scales that have been used for purposes other than job evaluation. But existing stress-level scales have been perceived as having no apparent use in job evaluation, and to try to invent a germane one was considered an invitation to walk into a quagmire. In view of all the controversy over the concept (stress “in” the person or “in” the job) and professional views of the field of job evaluation, why take on perhaps the hopeless task of trying to define stress adequately for human resource and compensation professionals’ purposes and devise a scale of it for general use?

**Stress as a Concept**

To begin to answer the question we need to tighten up our understanding of the meaning of stress. At the turn of the Twentieth Century Walter B. Cannon, the eminent physiologist, discussed homeostasis (or equilibrium) in the human body (Cannon, 1914). He considered that to be healthy a human had to maintain internal balance. Cannon introduced the idea that one reacts to stressors in modalities of fight or flight. Physicians picked up on the idea from him of examining the individual’s social environment, living conditions and emotions in health and behavior (McLean, 1979).

Hans Selye is generally regarded as the introducer of the term stress in studying human behavior in the 1960s or earlier (Selye, 1965). He connected emotions and human behavior and described the “global adaptation syndrome” (GAS). This syndrome included three stages of physical stress reaction:

- An alarm reaction in which a “call of arms” of all the defenses of the human body occurs;
- A resistance effect in which there is a replenishing of the body's defensive capacities that were depleted in the alarm stage; and
- An exhaustion alarm causing a premature aging and breakdown of the body due to excessive demands that the body is having difficulty in meeting.

By the 1970s Selye was convinced that psychosocial stressors made more demands upon an individual’s behaviors, thoughts, or attitudes (Selye, 1974 and 1976). He hypothesized that nonspecifically introduced psychosocial stressors could create physical damage to the human body that were as damaging as physical stressors. Selye also went on to suggest not all stress is “bad”. He pointed out there is also “good” stress. There are people who work
best under stress (and many times know this about themselves) and others who dislike stress and strongly prefer situations and work that do not call forth a reaction of stress. We noted the phenomenon was present in the anecdotes about the different air traffic controllers discussed above where the individual variance in the toleration of stress was examined. In their own ways the controllers in the example reflected “eustress” (good stress) and “malstress” (bad stress, perhaps what we also mean by “distress” in talking about a perceived problem-loaded life or job).

Research on stress has proliferated in the past 20 years, although little if any of it has connected stress with improving the adequacy of job evaluation plans by suggesting stress could be scaled into a compensable factor. Yet observation suggests that administrators and employees in well managed organizations today take occupational stress seriously. They believe it can have negative effects on human work performance and ultimately on the economic success of an organization. However, there are plenty of managers and employees who accept the notion that some stress is needed to increase their productivity. But stress overload can interfere with an individual’s performance (Reynolds & Shapiro, 1991). If managers and employees take stress this seriously, then there are grounds for believing stress should be taken into consideration in evaluating a job. How can this be done?

**Job Evaluation Reconsidered**

The job evaluation process as it is normally conducted by the point method consists of several well-known steps (Emerson, 1991):

- Analyze the job by gathering the job facts;
- Write a job description;
- Convert the salary description into a score; and
- Relate the score to pay rates obtained through surveys of the pertinent labor market(s).

In order to incorporate stress in the job evaluation process the stress factor per se must seemingly be taken into consideration when the job description is drafted, reviewed by a job evaluation committee, and finalized. The person(s) conducting the job analysis and making the job study must know what is meant by stress and how to describe and record it meaningfully for the job under scrutiny.

A variety of physical and social psychological stressors could be considered in the job study based upon the observations and logical inferences of a keen job analyst and the type of job being analyzed. For example, extreme heat or cold in the work environment could be present; heavy and repetitive lifting could be the main duties; rigid production deadlines might pertain; or overall end-product meticulous responsibility for quality and conformity with engineering specifications could be expected. Yet each of these might be considered on such separate scales as respectively: environmental working conditions, physical requirements of the work, responsibility for production, or responsibility for product. In other words, some professionals could argue traditional job evaluation already provides for stress-level assessment through well known and wide use of numerous compensable factors with which experienced members of job evaluation committees are quite familiar. Thus, it could be said that stress could, to some extent, already be subsumed in these factors.

One of the functions of job evaluation is to create a relevant structure of job relativities that covers all the occupations or large clusters of closely related families of occupations in an organization (or major segment of a particular establishment). The issue then becomes not
whether a job analyst can comparatively evaluate different jobs using a common set of criteria but instead how those criteria should be selected, defined, differentiated so as not to overlap, and be weighted. If we make a conscious effort to choose to use stress as a variable in job evaluation, we must define it as carefully and as usefully as we can, and provide scalar points in reference to it. In defining stress, one needs to remember that the job analyst is typically neither a physiologist nor a doctoral-level psychologist. Yet to measure stress the analyst needs to be sufficiently aware of human physical and psychological reactions so that they can be taken into account in the job study, then reported verbally in the job analysis report and, finally, set forth clearly in the job description. It is perhaps best to hold to a concept of stress that is simple, such as stress is the result of the individual’s body reaction to stress (either external physical pressures on the body or internal pressures experienced by the human being that can be reported to the job analyst by the job incumbent in an interview).

The analyst needs to be trained in how to observe a sample of workers and managers in the same job at different times of the day and in different locations (and, if relevant, on different shifts). It is especially important that an adequate sample be observed and interviewed at work because the goal of the job study should be to gather data (job facts) about stress so that the data about the amount, depth, and duration of stress can be examined and, if necessary, in a certain sense, ultimately averaged. The latter involves, of course, human judgement and adjusting of perhaps a range (but hopefully a limited one) so that the analyst is left with the possibility of a reasonable decision in choosing a point on the stress scale that is appropriate for the job studied.

Insofar as preparing a stress scale is concerned the weight of stress as a compensable factor relative to all the other compensable factors in the job evaluation plan needs to be determined (and then the number of degrees on the scale decided upon). How important in weighting should stress be? It should perhaps be considered as at least as important as physical demands, mental/visual effort, environment, or similar factors in job evaluation which attempt to recompense the incumbent of a job for aspects of the work that are essentially negative and basically unwanted circumstances. These are onerous, unpleasant, or humanly unappealing aspects of jobs which people normally dislike performing but must accept because they involve tasks and duties which are inherent in the jobs. This means they either have not been or cannot be engineered or designed out of the work.

Management recognizes these “negative” compensable factors as important to employees, and the latter are satisfied to know that the onerous work they do to perform them is singled out and paid for. However, the “positive” compensable factors in job evaluation plans are usually weighted higher than the negative. Thus many job evaluation plans may grant as much as 50 percent of the total weight in the job evaluation plan to such positive factors as education or work experience required to carry out job duties. These two factors may seem passive and to be almost undemanding in the performance of work and yet without meeting these requirements of the job through dedication to the learning or acquiring the requisite skills for the mastery of the tasks and duties involved an individual could many times not perform the job at all. Conceivably these two could be weightier than the remaining eight or ten factors in toto.

Next comes assigning point values to the stress levels observed. Again, it is important to keep in mind at this point that the stress described at each scalar level is not a perfect measure of the stress inherent in the job. Rather it is the approximate level of stress that would be felt on the average by a person in the performance of the job. As previously stated, to try to discover the exact level of stress inherent in a particular job is an impossibility because of individually perceived differences in experiencing stress. Yet some consistency in reported
perceptions of people in the same job could be expected. With this in mind it becomes
necessary to establish meaningful scalar degree levels with plausible cutting points between
them.

**Composite Stress Scale - Example**

Next is an illustrative stress scale that has been designed to compensate incumbents in
jobs in a manufacturing environment in which the products are neither complex nor heavy nor
in a basic industry. The production processes are "hi tech" but the operatives performing the
work are semi-skilled and normally serviced by skilled tradespersons who probably experi-
ence lesser stress than the operatives because their work is different. The stress scale could
be designed geometrically to show the following:

**Stress**

Definition of factor: The employee's reaction to either
external physical pressures or to reported internal
pressures attributed to carrying out job tasks and
duties.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Consistent work schedule daily; almost never has overtime; rarely if ever has tight deadlines; interacts only with peers and supervisor; no overload pressure; cost control not of concern; no shift work; no skills required, except follow directions; no trouble-shooting required.</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>Work schedule rarely changes with occasional scheduled overtime; deadlines are usually loose; interacts only with peers and supervisors; occasional overload pressure; cost control seldom of concern; may rotate two shifts; may use several semi-skills; directions are set and seldom changed; no trouble-shooting required.</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>Work schedule changes regularly with some unscheduled overtime; deadlines tight but seldom change; interacts mostly with peers and two lowest levels of line supervision; intermittent overload pressure; cost control occasionally of concern; rotates on two shifts (never graveyard); knows several semi-skills used repeatedly; directions change occasionally; trouble-shoots rarely and only on certain problems.</td>
<td>20</td>
</tr>
<tr>
<td>D</td>
<td>Work schedule varies frequently with some unscheduled overtime; deadlines very tight and somewhat changeable; interacts with peers and all levels of line supervision and occasionally with staff process controllers; frequent overload of work; subject regularly to cost control; rotates three shifts; requires acquiring many semi-skills and occasionally learning new ones; directions change occasionally; trouble-shoots most problems within scope of job.</td>
<td>40</td>
</tr>
</tbody>
</table>
Work schedule varies daily, with much unscheduled overtime; deadlines very tight and very changeable; interacts with peers, with all levels of line supervision and staff process controllers; overload of work constant; subject to rigid cost control; regularly rotates three shifts; requires acquiring many semi-skills and learning new ones regularly; directions change very frequently; trouble-shoots all problems within scope of job.

In this stress scale, which is tailor-made to fit a particular setting (and not, by implication, thought to be universal) an attempt has been made to scale mostly negative and humanly taxing psychologically based stress that could, in time, wear down an employee physically. The scale is carefully constructed to exclude under stress such humanly taxing experiences as high noise levels, inherent hazards, and dangers on the job that even a sound safety program would have difficulty controlling or vibrations and other disturbances that could be viewed as stress-inducing. These phenomena would be logically included under other compensable factors such as the work environment, safety, hazards, or the like.

The method of incorporating stress as a compensable factor in job evaluation that has been described above has its faults not the least of which is determining how much stress on the average exists in the job. The problem is combated in the method described by the job analyst’s sampling of fairly large numbers of employees in the conduct of the empirical job studies at the job site. Managers and employees alike are asked by use of the job analyst’s questionnaire to express the stress they feel in the conduct of their work. The domain is job facts as seen by the manager or employee and does not drift into inquiries about sources of stress the individual may attribute to non-occupational domains. In this way the goal is to steer away from commingling in the job study stress “in” the person owing to non-job-related life experiences and instead to seek insight into sources of stress “in” the job itself (i.e., job and context) including the surrounding social and management context in which the work is carried out. There is probably some interplay between the two and perfect isolation is not possible. But heuristically the method of job study advocated tries in a very careful way to examine and isolate stress “in” the job and its conduct rather than other matters, especially possible off-the-job and outside-the-organization stressors.

**Conclusion**

Is the method explained in this article something that all organizations should consider as worth trying? Every organization is different but the widespread reporting of stress and burnout at work suggests many companies and agencies should consider using (or at least experimenting with) a stress scale in job evaluation. However, before embarking upon such an effort the organization should probably determine if the stress it thinks it is discovering among its occupations is “eustress” or “malstress.” For example, it could be that in the sales segment of an organization that its job analyses show that the jobs there have built-in eustresses that people who enter careers in the field of sales thrive upon. Their eustresses could be other types of employees’ malstresses! The competitive challenges in sales must be attractive to many entrants selected into that field and career sales personnel, and an organization should be very careful in drawing conclusions about how stress as a compensable factor in the evaluation of field sales direct customer-contact selling jobs should be handled.
More generally, an organization should probably first study stress in its workplace by beginning with the goal of reducing malstresses that seem to be present in particular jobs and occupations. This approach may potentially provide insights into helpful and harmful eustress. The result could be at least an explication of the subjectivity of stress and should help management better understand the human impact of its job structure.

Also, job analysts who embark upon myriad job studies to determine from job incumbents the extent to which they are experiencing stress in the job must be well trained in how to use a stress scale and ultimately identify the perceived “average” stress in a particular job. This should be a problem that is moderately difficult to surmount and alertness is unquestionably needed in working with a difficult concept such as stress and where it resides, in the job, in the person, or mixed. In a work organization where jobs are the link up the line to objectives, strategies, and results, it seems logical and plausible to begin there as well in finding a way to compensate for average work-induced stress.

A Final International Thought

Is there an international dimension to stress at work? Two decades ago American management scholars were enthralled by highly publicized and allegedly successful Japanese management concepts and methods. The Japanese seemed to be managing superbly, and American management appeared stodgy and fumbling. By the early 1990s Japan entered the worst recession it had experienced since World War II, which still grips its economy.

Today stress is topic number one in human resources management in Japan. The promises of lifelong employment have faded, and, instead, working longer and harder for the same level of pay has become the price for keeping one’s job. We can see much fatigue, anxiety, and stress due to overwork among Japanese managers and workers. Japan now loses 10,000 persons (mostly men) each year to “Karoshi,” a new word which has come to mean death by overwork (Efron, 2000). We Americans created the world “workaholic,” which is a close cousin to the Japanese word. Workaholics are numerous in the USA.

Industrialism and stress seem to be linked and to cross national boundaries and cultures. The parallel development of performance-based pay systems is probably also an outgrowth of the industrialism-stress nexus, which detract from joy in work. If stress is inevitable in developed industrialized countries and is likely to spread still more in the future, the operation of employee compensation plans needs to be studied so that we can experiment with the design and alignment of compensable factors in job evaluation plans.
References


(Author’s comments. In sixteen years of teaching employee compensation plans at Cal Poly Pomona, two students influenced my thinking on this somewhat recondite topic, and I am pleased to give them acknowledgement: John Daniels in the 1980s and Cheryl Becker in the 1990s).