

SESSION REPORT



61	M363	Handling Stress in the DP Environment	600
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STRESS MANAGEMENT IN DATA PROCESSING

About ten years ago the IBM Information Systems Management Institute (formerly Systems Science Institute) started its investigations about stress in the Data Processing Industry. We began to survey data processing people who earned their living as either technical professionals or managers. The people who responded to our survey were IBM field personnel and IBM customers.

We asked them: "How would you rate your job today compared to your job three years ago?" The responses were

More stressful	69.8%
About the same	10.4%
Less stressful	19.8%

We also asked them: "How would you rate your company today compared with three years ago?" The responses were

More stressful	61.8%
About the same	25.0%
Less stressful	11.8%
No answer	1.4%

From time to time we have informally surveyed people in IBM and the Data Processing Industry and the percentages continue at about the same levels.

Our first exploration into the subject of stress was motivated by Alan McLean, M.D., IBM Eastern Area Medical Director. Dr. McLean asked me to confirm results of a stress survey that he conducted in IBM during the critical point in IBM history: the announcement of System/360.

The data from these and subsequent studies lead us to conclude that this is a stressful profession. Of course data processing professionals have known this for some time. We have merely formalized this knowledge.

One of the most surprising outcomes, to me, of the survey was how the question "Have job pressures recently interfered with family life?" was answered. The responses to this question were:

Seriously	2.3%
To a considerable degree	11.7%
Somewhat	32.7%
Not often	26.6%
Rarely or never	26.8%

The first three responses are interpreted as significant. That means that over 46% of the respondents allowed the job to interfere with the family.

From our data, interviews, and informal conversations, it would appear that the family pays a high price when one or more breadwinner is engaged in our profession and allows it to interfere with family life. Among the consequences we have noted are the following:

Divorce
Separation
Isolation from the family
Drinking before conversing with family
"Taking it out on" the family
Impotence

This paper will cover what seems to be the sources of stress and how we pay for this with our health. A short paper, such as this, is a superficial treatment of a highly complex subject. Nevertheless, at the risk of superficiality, we will attempt to provide a few insights.

SOURCES OF STRESS

The industry appears to be plagued by impossible deadlines. When deadlines are not imposed by higher management, we seem to do it to ourselves by a super-optimistic view of what we can accomplish. We seem to go from one crisis to another. We seem not to be able to learn from experience, and approach each new project assuming everything will go right this time. Since this rarely happens, almost every project is a crisis in the very early stages.

Our stress problems are exacerbated by poor quality products, especially poor quality hardware and software. These tend to precipitate crisis according to Murphy's Law.

Accelerating change (see Toffler's Future Shock) only adds fuel to the fire. It doesn't matter if it is technological change or a change in the requirements stated by the user. Change frequently leads to stress, even when it comes in positive forms. Change, of course, pervades our industry.

We attempt to handle our stress in a paradoxical way. Our most frequently used approach is to handle personal stress by increasing our activity -- we become busier. This only seems to solve the problem, and it only makes things worse. We call this approach the Type A Behavior Pattern. One of the characteristics of the Type A Behavior Pattern is strained interpersonal relations, which leads us to the fifth source of stress in our environment.

According to Couger & Zawacki, one of the characteristics of people in the Data Processing Industry is low social needs. Telling D. P. Professionals, we have low social needs, leads to one of two responses, in my experience:

1. Denial
2. Aggression or Hostility
(A typical "Type A" response)

We start off handicapped with having low social needs and make matters worse by adapting a Type A Behavior Pattern in an attempt to handle our stress which leads to strained interpersonal relations. Strained interpersonal relations (and low social needs) exaggerate the problems we have with deadlines, quality and change. The result a vicious cycle is established so that over time the stress levels continue to amplify and we pay for that with our health.

STRESS AND THE BODY

Our first reaction to stress is the fight or flight response, sometimes called the "Alarm Reaction" or "Emergency Response." A vivid way to recapture this response is to recall an incident in your life where you have had a "near miss" incident. For most of us this has been a near miss highway collision. If you recall what was happening to your body immediately after the near miss incident you will have a good sense of Fight or Flight Response. One of the first things that happen is the Endocrine System pumps out a variety of hormones (soluble chemicals) one of the most

notable of these hormones is Adrenaline (Epinephrine) which produces the "shakiness" one experiences after near miss highway collisions.

During the Fight or Flight response our heart beat increases, our arteries constrict and our blood pressure rises. Blood chemistry is also changed to enhance coagulation. Energy is diverted from the digestive system to the muscular system to provide speed or strength. In addition, a host of other changes occur within the body and all of these occur each and every time we are subjected to any stress whether it is physiological, psychological or environmental.

The Fight or Flight response is intended to handle emergencies, not routine, everyday work problems. When stress persists beyond a short duration the body utilizes a three phase approach to the problem. Dr. Hans Selye the pioneer researcher in the field of medical stress calls this three phase approach the General Adaptation Syndrome. The first phase is the Fight or Flight Response (Selye calls this the Alarm Reaction) which has two subphases: Shock and Countershock. The second phase is the Adaptation Phase or the Stage of Resistance, and is of utmost importance in our discussion. The third phase is the Stage of Exhaustion a precursor to death.

Selye concluded in 1950 "that many of the most common maladies of man are 'Diseases of Adaptation', that is to say, the by-products of abnormal adaptive reaction to stress." Since 1950, we have learned a lot about health, disease and stress. It would appear that Selye was conservative in his estimate of "most." It appears to me as a serious student of the subject of stress and illness that all diseases (except iatrogenic diseases) are the result of stress and occur during the adaptation phase of the General Adaptation Syndrome.

During the second phase of the General Adaptation Syndrome the body resists the stressor and in the process of resistance becomes susceptible to other stressors. The first thing that is weakened during the second phase is the body's immune system. The weakening of the immune system plus

the abnormal reaction to the stressor provides the conditions for illness or disease.

Being sick is stressful. So that now conditions begin to arise that can develop a second vicious cycle of stress and illness (which is stressful and can lead to further illness, etc.).

When the obsessive, compulsive Type A Behavior Pattern is added to the vicious cycle of stress-illness-stress-illness you obtain a bizarre result. The data processing professional is proud of the fact that he or she is headed towards a serious coronary event. Further, they are proud that they obtain little relief from stress. In fact, they think this behavior makes them worthwhile individuals. They never consider that this could lead to a shortened life-span.

The problem is further compounded for those of us under 40 years of age. It seems as if there is no price to pay. The youthful resiliency of our colleagues under 40 and their ability to resist illness leads many of them to conclude that they can drive themselves and resist stress forever. But that is not the case, they are laying the foundations for poor health problems in the future. And because of their Type A Behavior Patterns it seems safe to say that many will manifest coronary problems.

A Perspective for Managing Stress

In my opinion, we need to become more aware of what is happening to us personally and the costs that we will someday incur. We need to learn more about how to handle work situations and our responses to them. We also need to learn how to manage our stress and how to decrease our vulnerability to work stressors. And finally we need to reexamine the relationship of work and family, and the relative importance of each in our lives.

Given our busy schedules, our deadlines, and the quality and change problems we encounter that leaves very little time for us to learn the lessons above.

So the beat goes on . . .