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Career women face more work-related stressors than men, which has a detrimental effect on their physical and mental health—and which, in turn, deters them from performing at their best or aspiring to high managerial positions.

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The High Cost of Stress on Women Managers

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Executive health is an issue of great interest and importance to occupational health doctors, personnel managers, and others responsible for the well-being of people at work. But there has been very little long-term research into its nature, extent, and causes. One of the first major studies in this field is currently being carried out by Cary L. Cooper and Andrew Melhuish (a British physician) among a group of nearly 500 male executives—each subject is being studied

over a ten-year period. This study reveals the costs of stress and some of the problems faced by managers in general, many of which may also be faced by women executives. To put into perspective the evidence that we have available on female managers' health, this article includes a brief summary of the Cooper and Melhuish study followed by a review of the research on the physical, mental, and behavioral manifestations of stress among women executives.

THE MALE MANAGER

In the middle 1970s, Cooper and Melhuish launched their ongoing study of 500 senior British executives; the subjects for the study were recruited from the Administrative Staff College at Henley and from a number of large United Kingdom (UK) companies as well.

Some of the early findings painted a bleak picture of the life of senior managers. It was found, for example, that 24 percent of the sample had one or two drinks per day; 11 percent had between three and six drinks daily; and nearly 2 percent had more than six. Only 1 percent of the sample were teetotalers. More than 30 percent of the sample had taken or were taking tranquilizers, and 24 percent took sleeping pills, particularly during business trips or when they worked long hours.

The main source of stress identified by executives who admitted being under pressure was work (in 57 percent of the cases). Family problems created by work ran a close second (45 percent). When asked what aspects of work created the problems, the three most frequently mentioned were "my relationship with my boss" (34 percent), "frustrated ambition over future career" (33.5 percent), and "hours away from the family" (30 percent).

Although most executives said that they spent "around 40 hours" a week at work, many admitted spending a lot of time working at home and spending at least two nights a month away from home. It is also interesting to note what senior executives actually do with their time during the workweek. On average, managers spent 15 hours per week working at their desks, six hours in scheduled meetings, the same length of time in unscheduled meetings, four hours on the telephone, three hours working around the place of work, four hours travelling on busi-

ness, and two hours entertaining for business purposes.

The Coronary-Prone Manager

The main purpose of the research was to pinpoint those executives who were running the risk of stress-related illness and then to identify the primary sources of the pressures on them. The project resulted in two rather interesting findings. First, when a manager was found to be in danger of having a coronary, he tended to:

1. Display a pattern commonly referred to as Type A coronary-prone behavior; this behavior is characterized by extremes of competitiveness, striving for achievement, aggressiveness, haste, impatience, restlessness, hyperalertness, and feelings of being under the pressure of time and the challenge of responsibility.

2. Be in a job that had recently changed and that currently placed many demands on his time and relationships.

3. Work for a company with a poor organizational climate and few, if any, facilities or mechanisms for social support.

4. Feel that his personal values conflicted with those of the company—in effect, that the organization was impersonal and not concerned about his well-being.

A typical example of an executive who met the criteria outlined above was Mr. Smith (not his real name), a 46-year-old senior sales manager with a large successful firm. He had been promoted to this position after 16 years with the organization at different levels of the sales force. Until the age of 30, Mr. Smith took regular exercise, did not smoke, and showed no symptoms of stress. Promotion to a senior management position meant that he had to entertain many customers, manage a larger sales force, and travel frequently, both in the country and abroad. He began to eat, drink, and smoke

much more during the course of his working week, and by the age of 40 he had put on nearly 28 pounds, was taking no exercise, and was showing signs of ill health. His blood cholesterol and lipids were very much above normal. His blood pressure had risen sharply, and his cardiogram was slightly abnormal. Mr. Smith's health began to deteriorate from the time of his promotion when he began to work longer and longer hours and to take a lot of work home.

His active and socially active wife resented the fact that he frequently arrived home late, and that when he was there, he was either watching television or doing more work. His marriage was beginning to suffer, which made his other problems worse. The company continued to put further pressure on him at work, even though it knew of his domestic situation and the workload he was carrying. At Christmas he had a heart attack, from which he is currently recovering.

The Manager at Risk of Mental Ill Health

In addition to examining the factors in an executive's life that are generally associated with coronary heart disease, the study is also attempting to explore characteristics that might be related to emotional and mental ill health. The results so far indicate that when a manager is at risk of mental ill health, a different set of personality and job factors are present. For example,

(1) The manager, who tends to be of fairly high intelligence, is tense, apprehensive, and suspicious.

(2) He works in a situation where there is a high degree of job insecurity (fear of being laid off; lack of promotion prospects, office politics, for example).

Mr. Clark (again, a pseudonym) is a classic example of this phenomenon. The pattern of behavior that he displayed recurred many times in cases of acute mental



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stress. At 47, he is a senior manager with a printing firm. When he was recruited to the research project several years ago, his medical examination proved normal. Then, two years ago his smaller firm was taken over by a larger printing firm, and his future became doubtful. He began to have frequent episodes of panic, in which he was very conscious of his heartbeat, began to sweat profusely, and was fearful of crowded places.

After the takeover, he found that his job was retained and his future more secure. The episodes of panic evaporated until a year later when he was up for promotion. He and a close colleague were competing for the same senior post; during this period Mr. Clark found himself once again experiencing palpitations of the heart, frequent episodes of panic, sweating, and fear of crowds.

He had to take two weeks off from work because of "nervous debility" and had to be driven to work by a chauffeur or colleague for the next four weeks. His inability to cope with the situation at work fed back into his home life and created difficulties there as well. This circular process of pressure at work affecting personal relationships at home, and then adverse home life affecting work performance, is a typical problem affecting executive well-being.

Early Study Findings

Thus, the first few years of the research program suggest that the ambitious, driving "workaholic," preoccupied with meeting deadlines and working in a job or for an organization that places heavy demands on his time and skills without providing mutual support or concern for his well-being, is a likely case for coronary heart disease.

The research also indicates that managers who are more vulnerable to mental ill health are likely to be more intelligent than average, more suspicious, apprehen-



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sive, serious, and tense and, most important of all, working for an organization that cultivates job insecurity — that is, the company's management structure is dominated by internal competition rather than mutual support and teamwork.

These early findings are worrisome, particularly at a time of little or no economic growth and a high level of unemployment, job insecurity, and lack of trust at work. Given these conditions, and the lack

of counselling, social support facilities, and enlightened company personnel policies in most U.S. and UK organizations, the immediate future of the "stress industry" looks buoyant, while the future well-being of managers looks bleak.

PHYSICAL AND MENTAL HEALTH AMONG MANAGERIAL WOMEN

It is important to ascertain to what extent the stresses and strains inherent in being a woman in management will affect the physical and mental health, and overall well-being of this female occupational group. According to J. A. Birnbaum in *Women and Achievement*, professional women tend to have higher self-esteem and better mental health than homemakers of similar educational status—but, in comparison, they lack relaxation time. For some (especially the working wife), the excessive pressure and scarcity of free time can adversely affect stress-coping abilities and result in such mental and physical illnesses as depression, anxiety, high blood pressure, and headaches. This, in turn, can lead to such behavioral symptoms as poorer work performance; changed sleeping habits; alcohol, drug, and smoking abuse; poor interpersonal relationships with colleagues; and occasional absenteeism.

As Cary L. Cooper has suggested in his book *The Stress Check*, working women may well be joining the increasing number of men who suffer from stress-related illnesses as a result of work. In 1976, the American Heart Association report estimated the cost of cardiovascular disease in the United States at \$26.7 billion a year. In England and Wales, the death rate resulting from coronary heart disease (CHD) in men aged 25 to 44 doubled between 1950 and 1973, and has increased much more rapidly than that of

men in older age ranges (for example 45 to 54). Indeed, by 1973, 41 percent of all deaths in the age group 25 to 44 were a result of cardiovascular disease. Although CHD is generally twice as prevalent in men as in women, some recent research findings are disturbing. The National Heart, Lung, and Blood Institute (NHLBI) reanalyzed the data drawn from the prospective Framingham Heart Study and, while they discovered that working women did not have a significantly higher incidence of coronary heart disease than housewives, and that their rates were lower than for working men, there were other disturbing findings. For example, in an analysis of the information available on married (including divorced, widowed, and separated) versus single working women, NHLBI found a substantial increase in incidence of heart disease. But the most revealing of all their results appeared when they compared married working women with children against those without children. In this situation they found that "among working women, the incidence of coronary heart disease rose as the number of children increased." This was not the case, however, for women who were housewives; indeed, that group showed a slight decrease with an increasing number of children. Combine these findings with the strong association between Type A behavior and CHD (along with hypertension and so on), and one could hypothesize that female managers who are most at risk are Type A individuals who are married with children.

Furthermore, the NHLBI researchers also found that working women as a whole "experienced more daily stress, marital dissatisfaction, and aging worries, and were less likely to show overt anger than either housewives or men." In a review of the research literature in the field of marital adjustment in dual-career marriages, a University of Michigan team found that of the 13

Figure 1
WOMEN MANAGERS REPORTING PHYSICAL AND PSYCHOLOGICAL ILLNESS
 (total 135 managers)

<i>Physical</i>	<i>Percentage</i>	<i>Psychological</i>	<i>Percentage</i>
Migraine	27.4%	Tiredness	69.6%
High blood pressure	9.6	Irritation	60.0
Arthritis, and/or rheumatoid arthritis	8.1	Anxiety	54.4
Eczema	5.9	Tension (neck or back)	42.2
Gastric and/or peptic ulcer	4.4	Anger	35.6
Asthma	2.2	Frustration	34.8
Heart disease	0.0	Sleeplessness	34.1
Stroke	0.0	Dissatisfaction with life or job	34.1
		Low self-esteem	25.9
		Depression	23.7

important studies involved, using either a U.S. national or regional sample, at least 11 of them showed that marital adjustment was worse for dual-career wives than for non-working wives. There are also indications that more women are taking up smoking and drinking. For instance, admissions to mental hospitals in Britain for treatment of alcoholism has doubled for men and trebled for women in recent years.

Symptoms of Stress Among Women Managers

In an investigation of stress among 135 top female executives in the UK, we sought to discover health problems, both psychological and physiological. Figure 1 illustrates the percentage of our sample who reported having had stress-related physical and psychological symptoms of illnesses. It is interesting to note that with the exception of migraine headaches, overall the sample did not report a high incidence of physical ill health. Headaches and migraines, however, are reported to cause more lost working days than strikes

and to be an illness suffered by the young and by three times as many women as men. There are many causes of migraine, including physical and psychological stress, change of climate, strong artificial lighting, noise, smoking, and high blood pressure. However, compared with physical ailments in general, a greater percentage of our women managers reported having experienced psychological maladies—with tiredness, irritation, and anxiety being experienced by well over half the respondents (see Figure 1). The high level of psychological maladies and migraines reported by the sample may have been enhanced both by stress experienced at work and by the limited relaxation periods in their personal lives. Indeed, 71 percent agreed that they felt their physical and psychological health problems were in some way related to the stress they experienced at work.

In a later but more representative study of supervisory, junior, middle, and senior managers, we were able to differentiate physical and emotional ill health by levels. We asked this question of the sample of

women managers: "In the recent past, have you suffered from any of the following due directly or indirectly to work pressures?" At all levels of the managerial hierarchy, tiredness was the most common stress symptom reported. For junior and middle managers, depression came next; whereas for the supervisory and senior managers, anxiety was rated as the second major symptom. Irritability and sleep troubles were also ranked highly by all levels, with the exception of supervisors who suffered more from migraine headaches. (See Figure 2.)

The range of symptoms that executive women suffer is revealed in these quotes from our interviews:

I've had chronic migraines since I took this senior management post.

I get frequent upset stomachs which I know are directly related to my job; indeed, as soon as I know I have to see my boss about something, I find it hard to cope and feel my stomach grip.

When I'm under pressure I get pains in my chest; it was like that yesterday.

I get very very tired. I go to bed but sometimes I wake up in the middle of the night and think of all the things that should have been done and which I haven't done.

I seem to eat like a pig when I am under stress at work. When there are deadlines and pressure on me from my boss, I put on pounds!

When I first became a supervisor I smoked more and sometimes I would come home and haul my eyes out. I used to say to my husband that it's too much, I can't cope. I still feel the pressure, and the symptoms still occur, but less frequently and less severely.

My job has given me severe headaches and frequent crying bouts. I also find it very difficult to sleep before a big meeting or when I feel I'm being evaluated.

Many of the women don't like to admit that they suffer from some form of stress-related illness or manifestation and hide it from their colleagues at work: "When I was going through trouble at work and the accompanying stomach pains, even when I

was very ill, I often forced myself to come in so I wouldn't look weak as everyone knew there were problems. In fact I had to have 6 weeks off due to my stress illness, and I felt terribly guilty about it. Although I knew it was stress-induced, and mental as well as physical, I wouldn't admit it to people at work . . . there's still a stigma, you know!"

The reason many women seem to suffer stress-related manifestations at work is related to their lack of control of the work environment. As one of our middle managers suggested, "There have been regular intervals in my life when the stress has got so bad that the doctor has advised me to take tranquilizers, and occasionally antidepressants. They helped me over these situations, which were always related to my work problems. I find personal problems much easier to cope with because you usually have control over them; at work you're not in total control of most situations."

I Can't Afford to be Ill

There is a large group of female managers who admitted to us that although the pressures of work were enormous, they couldn't afford to be ill:

I have to be healthy, I can't afford to be sick. I have always promised myself I would indulge [in] the luxury of a lengthy illness as soon as I had time, but there isn't the time.

I get colds occasionally, but I usually work through them and come into work. I only take time off if I can't move, and that is rare.

There is even a proportion of these women who do get ill but on 'their own time': "I don't get ill; I believe if you get ill it's because you choose to get ill . . . I get ill on the holidays!"

On balance, we were surprised at the large numbers of women who show only minor symptoms of stress from the organizational and home pressures associated with their dual roles.

BEHAVIORAL MANIFESTATIONS OF STRESS

Some women managers suffer from physical and emotional symptoms of ill health, while others manifest the stress in behavioral terms — through decreased job performance, increased smoking, the use of drugs, excessive drinking, and marital or relationship breakdowns.

- *Smoking.* In a recent book, *The Ladykillers: Why Smoking is a Feminist Issue* (Pluto Press, 1981), Bobbie Jacobson found that female managers in the United States smoke more than their male counterparts and more than women in any other occupational group. Forty-two percent of women executives smoked regularly, while only 37 percent of men in similar jobs did. By the end of the 1970s, over 8,500 women died of lung cancer annually. She found that although men tend to smoke because of habit or as a method of relaxing, women smoke during periods of stress. Jacobson also reported a controlled study in which men's and women's smoking behaviors were observed during the showing of two films, one horror and one comedy film. It was found that during the horror film, over 75 percent of the women reached for a cigarette, while only 30 percent of the men did so, while the reverse was true during the showing of the comedy film. By 1978, less than 24 percent of professional women in Britain were smoking, compared with over 40 percent of blue-collar women.

However, of our sample of junior, middle, and senior managers, over 40 percent said they smoked an average of 23 cigarettes a day and significantly more during the workweek than during the weekend. Of those who smoked, 74 percent claimed they did so because of work stress and the rest attributed it to other reasons (personal crises, habit, and so on).

- *Divorce.* Divorce rates have risen

steeply over the past 25 years; at least one marriage in four in Britain and one in three in the United States ends in divorce within 15 years, but three-quarters of the divorcees marry again within three years. Not only is divorce on the increase in the UK, but it is growing much faster than in most other European countries.

Marital difficulties can occur among managerial women because of the conflicts between home and work. Many of the women we interviewed complained of the fatigue and feelings of conflict that result from running both a home and career. Many husbands, though, were supportive in terms of their managerial wives' careers, reporting that they shared the home duties. In reality, however, most of the married women executives believed that they spent more hours a week on housework and child care than did their husbands. Some women, on the other hand, received no help whatsoever from their husbands in the home. Problems can also arise when the woman overtakes her husband in terms of salary and status.

- *Drugs.* We have also been surprised at the number of female executives who take tranquilizers, antidepressants, sleeping pills, and so forth as a means of relieving tension. In fact, although Cooper and Melhuish found about 30 percent of their male senior managerial sample taking regular stress-relieving drugs, in our sample of senior female executives we found that over 40 percent had been or were currently taking these drugs. At the middle and junior management levels the numbers of women on valium and other related drugs was nearer the 30 percent mark. Because of the stresses of the dual-career role and their own inner achievement pressure, some women managers find themselves thinking about work during their 'private time': "I find very often my brain is ticking over like mad at night and I can't sleep . . . I take valium then, but

Figure 2
 WOMEN MANAGERS WHO SUFFERED VARIOUS SYMPTOMS BECAUSE OF WORK-RELATED PRESSURES
 (total 61 managers)

	Percentage of Managers				
	Senior	Middle	Junior	Supervisors	Total Sample
Tiredness	67%	45%	72%	91%	65%
Depression	33	35	50	18	35
Anxiety	40	25	21	36	30
Irritability	40	20	29	—	23
Sleep troubles	20	20	29	18	20
Headaches/migraine	13	5	21	27	15
Premenstrual tension	7	5	14	—	7
Over-reacting	—	—	29	—	7
Crying	—	—	7	9	3
Aggression	—	5	—	—	2
Nervous rashes	—	5	—	—	2
Nail biting	—	—	7	—	2

never during the day." Others find that their self-induced expectations started while they were students at the university and reappear under the pressures of work, as this young middle manager reveals: "I have taken lots of drugs such as valium and pep pills since university. At the beginning of my managerial career I really didn't need them, though, and my marriage helped to settle me. Then, recently, everything at work seemed to come down on top of me, soon after my promotion. I went through a bad patch and got tablets from my doctor. It was due to the buildup of pressures at work and my own lack of faith in my abilities. I just felt I couldn't cope with anything at all."

• *Alcohol.* Another possible manifestation of stress is alcoholism, which has reached epidemic proportions in Britain and the United States. Deaths from alcoholism trebled between 1965 to 1977, and admissions to mental hospitals for treatment of alcoholism doubled for men and trebled for women in recent years. In the United States,

the ratio of female to male alcoholics in- creased from 1 to 5 in 1962 to 1 to 2 by the late 1970s and may to some extent be accounted for by the rise of the dual-career family and society's neglect of their dilemmas. One of our rising female executives described her drinking problem: "Yes, I drink quite a lot. I went through a phase where I used to drink every day just to keep on top of my work, but I don't do that any more. I drink to relieve the tension and pressure of work. Most of my colleagues think I am just a social drinker, but it is more serious than that. I now do what I can to control it, because I know where it will lead me."

It has been suggested by S. C. Wilsnack in a study of 28 female alcoholics that those women who do not have a well-developed sex-role identity are more vulnerable to alcoholism. Indeed, she found that female alcoholics come from a family background that consists of a dominant, unaffectionate mother and a weak, passive father: "[T]his parental combination, in which both parents deviate from normal sex-role behavior, does not seem favorable for the daughter's devel-

opment of a secure, positive feminine identification."

Fay Fransella and K. Frost feel that career women may be at risk of stress-related illnesses and manifestations because they are expected—or feel they are expected—to play out a masculine role at work. They suggest that the evidence for this is beginning to mount in various longitudinal studies—for example, in one by G. Odegard of Norwegian who have been admitted to mental hospitals up to 25 years after graduation. The study found that not only were there significantly more women admitted, but there was a higher proportion of career women and graduates than women from the female population at large.

CONCLUSION

Reviewing the research about women managers' health and well-being, one can conclude that, like their male counterparts, female executives are subjected to occupational stress. However, we believe that our research results and others' studies indicate that career women face additional stressors, which subject them to even higher levels of work-related stress. This, in turn, may contribute to the following:

1. Deterring women from entering and/or remaining in managerial positions.
2. Stopping women applying for promotion, especially for senior or top managerial positions.
3. Enhancing Type A behavior patterns that subsequently increase the risk of stress-related illnesses.
4. Having possible detrimental effects on physical and mental health that may influence behavior and job performance, and hence promotional prospects.

At present, society does indeed appear to demand that the woman manager of

today and tomorrow be "superhuman" in order to succeed and survive. There is a clear need for a change in attitude and organizational policy. In the words of a new female management trainee: "[T]he change I would like to see is that organizations and people react to people as people—not as male people and female people." Within the next couple of years, half of those attending all university management courses will be females; therefore, organizations will have to make that adjustment sooner than many male managers think.



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This article is based on a forthcoming book by the two authors, *High Pressure: The Working Lives of Women Managers*, to be published by Fontana Books of London. Other related studies and publications cited in this article include the study by Cary L. Cooper and Andrew Melhuish, "Occupational Stress and Managers" (*Journal of Occupational Medicine*, September 1980) and the following: J. A. Birnbaum's "Life Patterns and Self-Esteem in Gifted Family-Orientated and Career-Committed Women" in M. T. H. Meulink, B. B. Tangri, and L. W. Hoffman's (eds.) *Women and Achievement* (Hemispheric Publishing, 1975); Cary L. Cooper's *The Stress Check* (Prentice-Hall, Inc., 1981); Fay Fransella and K. Frost's *On Being a Woman: A Review of Research on How Women See Themselves* (Tavistock, 1977); S. G. Haynes and M. Feinleib's "Women, Work and Coronary Heart Disease" (*American Journal of Public Health*, Spring 1980); B. Jacobson's *The Lady-killers: Why Smoking Is a Feminist Issue* (Pluto Press, 1981); and S. C. Wilsnack's "Femininity by the Bottle" (*Psychology Today*, April 1973).