

## PERSONALITY FACTORS AND STRESS

### Introduction

As noted elsewhere, studies into the relationship between stress and illness typically talk about 'group' differences or correlations (e.g. medical students, people who have been bereaved, etc.). Within those groups, there are large **individual differences**, and some people experiencing bereavement (for example) don't show impaired immune system function. Thus, **individual differences** can moderate the effects of a potential stressor. One of the most important individual differences is personality, and two important personality types that influence the impact of stressors are the **Type A personality** and **hardiness**.

### Type A and Type B behaviour

As well as its effects on the immune system, stress has also been strongly linked with **Coronary Heart Disease (CHD)**, such as **atherosclerosis** (a narrowing of the arteries preventing blood from reaching the heart). The earliest research into the relationship between stress and CHD was conducted by **Friedman & Rosenman (1959)**.



**The effect of Atherosclerosis  
on an artery over time**

Friedman and Rosenman wondered why American men were more susceptible to CHD than American women. Since most American men worked at that time and most women did not, the researchers suggested that job-related stress might be an important factor. However, since not everybody who works develops CHD, the researchers decided to investigate personality differences between those who developed CHD and those who did not.

Their research showed that there seemed to be particular behaviours which were associated with increased vulnerability to CHD. They called these behaviour patterns **Type A behaviour**:

### **Characteristics of Type A behaviour**

#### **Time pressure**

- Working against the clock
- Doing several things at once
- Irritation and impatience with others
- Unhappiness at having nothing to do

#### **Competitiveness**

- Always playing to win at games and at work
- Measuring achievement in terms of material productivity

#### **Anger**

- Self-critical
- Hostile to the outside world
- Anger often directed inwards

The Type A personality is described as: "an action-emotion complex that can be observed in any person who is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time, and if required to do so, against the opposing efforts of other things or other persons." (Friedman & Rosenman, 1974)

**Type B** personalities are more relaxed about life in general, easy going, more patient, not driven to achieve perfection, forgiving, and not easily angered. **Type AB** personalities show some Type A and some Type B characteristics.

To test their idea about Type A and CHD, Friedman & Rosenman undertook a nine-year longitudinal study involving over 3,000 initially healthy 39 to 59-year-old Californian men. They were interviewed about their reactions to potentially stressful situations, and classified as being either Type A or Type B.

The researchers found that even when risk factors such as smoking and drinking were taken into consideration, 70% of the 257 who died during the nine years after the study began were Type A individuals.

Friedman and Rosenman concluded that Type A and CHD are correlated, and possibly in a causal way (i.e. Type A behaviour possibly causes CHD). The *stress* itself associated with Type A behaviour cannot cause CHD. However, the exact mechanism linking stress to CHD is not known. One proposal is that chronic stress, involving repeated episodes of increased heart rate and blood pressure, produces *plaque formation* in the cardiovascular system.

Additionally, stress may increase *blood cholesterol* levels through the action of adrenalin and noradrenalin on the release of free fatty acids. This produces a 'clumping' of cholesterol particles leading to clots in the blood and artery walls, and narrowing of the arteries. In turn, raised heart rate is related to a more rapid build-up of cholesterol on artery walls. High blood pressure results in small lesions in the artery wall, and cholesterol tends to get trapped in these lesions.

### Evaluation of research into the Type A personality

The concept of the 'Type A' personality is well-validated, and questionnaires do measure what they claim to measure. Therefore it is **high in internal validity**. Additionally, although the original research dates from the late 1950s, the Type A personality is still the focus of much research. Therefore, the concept is **high in historical validity**.

However, the original research findings have only *sometimes* been obtained in studies in different cultures (e.g. Trappist and Benedictine monks) Therefore, it only has **limited reliability** and **cultural validity**.

Also, it is not clear what the *relative importance* of the Type A characteristics is. It isn't known whether they make an equal contribution to CHD or whether one is more important than the others. Research findings suggest that factors like **cynicism**, **difficulty in openly expressing anger**, and **hostility** may be making more of a contribution.

The research is **correlational**. Just because two things are correlated, it doesn't necessarily mean that one is causing the other. Additionally,

whilst the correlations are statistically significant, they are quite small. Therefore, their behavioural importance might be quite small as well.

Other research has suggested that there are other personality types that may be linked to illness. These include **Type C** (a person who has difficulty in expressing emotions, especially negative ones such as anger). Emotional suppression is correlated with immunosuppression, and has been linked with cancer and decreased sperm production. The **Type D** personality is anxious, gloomy, and a socially inept worrier. Research shows an increased likelihood of CHD in Types Ds. The **Type ER** personality is highly volatile, and alternates between happiness and despair. Mood swings reduce blood flow to the heart, and this personality is linked with the increased likelihood of further heart attacks.

Finally, and as noted previously, the exact mechanism by which Type A and CHD are linked is not known.

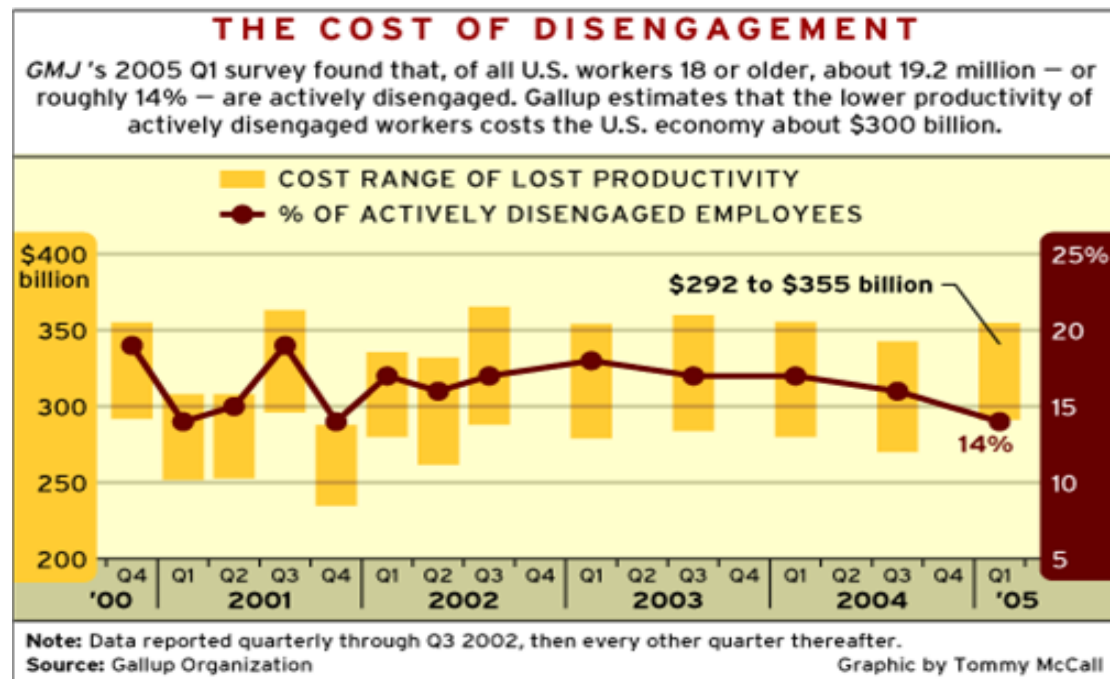
### 'Hardiness'

Research carried out in America suggests that there are three types of employee who work in large institutions:



The third group, the 'actively disengaged' are a particular concern. Again, research conducted in America suggests that it is this kind of employee who is a particular drain on the economy. This is because they are often absent from work. Some companies suffer in two ways from this. First, they lose the economic contribution an employee makes. Second, they continue to pay the employee even though s/he is absent. As the diagram

below shows, these employees may be costing the American economy as much as 300 *billion* dollars.



The concept of '**hardiness**' was introduced by **Susan Kobasa (1979)**. She defines hardiness as: "a cluster of characteristics distinguishing stress-resistant people from those susceptible to stress". There are 3 characteristics of the 'hardy personality':

#### Characteristics of the hardy personality - The 3 Cs

- **Challenge:** If you see change as a challenge rather than a threat, you are less vulnerable to the stressful feelings of being unable to cope
- **Commitment:** If you see your role as being meaningful rather than meaningless, you are less likely to give up when the going gets tough
- **Control** If you have an internal locus of control, you feel you are in control of what happens to you, rather than feeling you are a victim of circumstances

The 3 Cs are **adaptive interpretations** of stressful events, and research shows that people who score highly on the three Cs tend to suffer less stress-related illness. However, people who lack hardiness suffer more from stress-related illness and are therefore more likely to be absent from work.

## Evaluation of 'hardiness'

**Kobasa et al (1985)** measured the hardiness amongst employees of a major company which had a problem with absenteeism. She found that people who scored highly on measures of the 3 Cs were much less likely to be absent from work through illness, whereas those who scored low on the 3 Cs were much more likely to be absent, with longer absences positively correlated with very low levels of hardiness. These findings *support* the idea that hardiness somehow protects against stress and hence illness, as does the fact that strategies to increase hardiness are effective in reducing stress (This is covered in the next section).

However, Kobasa et al's research was conducted on American professional men, and so it lacks population and cultural validity. A further issue is that it is not clear what the relative importance of the 3 Cs is. It isn't known whether they make an equal contribution to hardiness or whether one is more important than the others. If anything, control is likely to be the most important factor given its importance as a workplace stressor.