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The effects of the Type A Behaviour Pattern,
perceived stress and social structure on
depressive symptomatology, alcohol consumption,
and smoking behaviours:
secondary analysis of an interaction model.

A thesis presented in partial fulfilment of
requirements for the degree of
Master of Arts with endorsement in
Clinical Psychology,
Massey University,
November, 1988.

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Acknowledgements

First, I want to thank my Mother, and my family for their constant encouragement and loving support from several thousand miles away. Second, my immediate community has understood and kindly overlooked so many idiosyncrasies on this 'mature' students's part, and for that I thank them sincerely. Third, my fellow students have always given me warm encouragement and this despite the demands and preoccupations of their own busy lives; to them also, I offer my gratitude. And last, but by no means least, once again I want to thank my supervisor, Dr. John Spicer, whose patience and equanimity in my regard, has never faltered. His generosity with time and expertise during the writing of this thesis has often prevented me from falling on the wrong side of the confidence barrier.

- Barry Leech

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ABSTRACT. A theoretical interaction model is presented relating perceived stress, the Type A Behaviour Pattern (assessed by means of the Structured Interview method), and the psychosocial variable close friends, with psychological and problematic behavioural outcomes. The model was tested in a secondary analysis of data from a community sample of 524 New Zealand males ages between 30 and 55 years (Spicer et al. 1981). As an adaption and elaboration of the original study model, stress variables included combined upset/excitement scores, upset alone, undesirable events, life events total, workload, loss upset, and bereavement upset. The latter two stress variables were constructed out of the original data. Outcome variables included depressive symptomatology, alcohol consumption, and smoking behaviours. Consistent with findings in Spicer et al. (1981), interaction effects show Type As more likely to smoke and consume more alcohol than Type Bs, when under stress. Another significant finding is that number of close friends did not moderate the relationship between the Type A Pattern and health outcomes. The Buffering Effect was therefore rejected for this group. Overall, evidence showed the benefits of adopting an interaction strategy

consequent upon the discovery of no main effect relationship among variables of interest. A notable few interactions were not in the expected direction, including the finding that Type As tended to drink more alcohol the more friends they had. Limitations of the present model focused on the relatively unsatisfactory performance of the workload and friends variables. Future studies of this type might well benefit from the inclusion of a qualitative component for each.

CHAPTER ONE

This thesis represents an investigation of associations among a complex set of variables at the centre of which is the Type A Behaviour Pattern (TABP). Pattern A has been the subject of much theorizing and experimental research since its presentation and elaboration by Friedman and Rosenman (1959).

The TABP is a summary label that was attached to a collection of behaviours which appeared to be common among middle-aged and younger cardiac patients. These individuals were subject to careful observation by Friedman and Rosenman (1974) during the course of their private practice. The four critical elements of this behaviour pattern were identified by Rosenman (1978) as marked aggressiveness, a low hostility-threshold, a sense of time-urgency, and excessive competition with others in the context of a desire to achieve. Albeit still a controversial phenomenon, the TABP attracts continuing attention primarily because it has been verified as an independent risk factor for coronary heart disease [CHD] (Matthews, 1982).

Adopting a multifactorial, interactional approach, the proposed model shown in Figure 1 includes: workload, general life events, social structure, the TABP, depressive symptomatology, smoking behaviour, and al-

cohol consumption. It also highlights three general main effects and three general interaction effects reflected in the list of hypotheses at the end of chapter two.

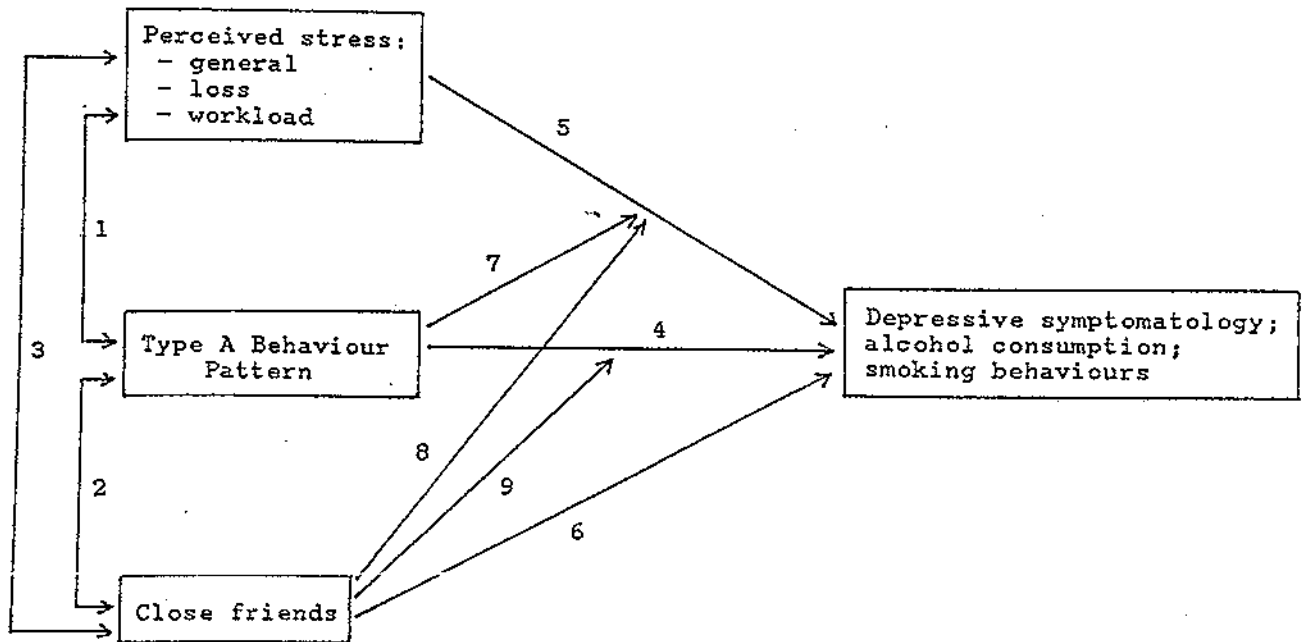


Figure 1. A model with the Type A Behaviour Pattern at the centre, relating perceived stress variables, and the psychosocial variable close friends with depressive symptomatology, alcohol consumption, and smoking behaviours. A numbered arrow represents a general hypothesis addressed in this study. Arrows terminating on boxes indicate possible main effects, and those terminating on other arrows indicate possible interaction effects.

This model is both an adaption and an elaboration of that designed and tested by Spicer, McLeod, O'Brien and Scott (1981). This author concurs with Spicer et al. (1981) in their assertion that the mixed results from the investigation of relationships between the Type A pattern and health outcome could well be explained by the theoretically-guided use of interaction analyses. This principle is a crucial one for the present study

and follows from the assertion that many TABP researchers have, in the past, been content to follow too simple a strategy for isolating hypothesized relationships between Pattern A and variables of interest.

Spicer et al. (1981) were concerned to examine associations among certain psychological correlates of CHD, as well as their associations with certain important somatic risk factors. The psychological variables chosen included the TABP, trait anxiety, trait depression, life-change and loss distress, and subjective workload. The somatic risk factors included in the model were: serum cholesterol, tobacco smoking, and blood pressure as traditional CHD risk factors, and serum triglycerides, uric acid and glucose.

The Type A behaviour pattern was operationalized by Spicer et al. (1981) in terms of its theoretical components - Type A personality trait and Type A behaviour - each considered to play a different role in the CHD risk pattern.

The present model is an adaption of the original in that the concern is exclusively with psychological variables and with the traditional global TABP dichotomy, placing Type A at one extreme and Type B at the other extreme of a continuum. This decision was taken, in part, because the 'trait-behaviour' division appeared

to diffuse the true impact of the pattern when tested in the pilot analysis mentioned in the next paragraph. Furthermore, depressive symptomatology (as distinct from clinical depression), alcohol consumption and smoking behaviours were included as psychological health outcome factors rather than as a trait and behavioural strains respectively. Depressive symptomatology was treated as an affective outcome because it is hypothesized to be a health-endpoint (Price, 1982) as distinct from a moderator variable in the relationship between the TABP and CHD somatic risk factors. In addition, the original model was elaborated by including social structure as an independent variable.

With theory as a guide, a pilot analysis was conducted on unpublished data from a Coronary Heart Disease (CHD) risk factor study conducted in Hobart, Tasmania in 1979. Subsequently, and after expectations were refined, a secondary analysis was made on data from the aforementioned Auckland Study (Spicer et al. 1981), focusing on the TABP, perceived stress, and social structure as the independent variables, and depressive symptomatology, smoking behaviour and alcohol consumption as dependent variables.

The Type A literature pays relatively little attention to the TABP as a risk factor for non-disease endpoints. While acknowledging that Type A is, in itself, a non-

psychopathological pattern of intense behavioural activation, it is proposed that the Type A individual's risk of an intermediate psychological health outcome - specifically, depressive endpoints, smoking behaviours, and alcohol consumption - may increase as a function of the interaction of environmental factors.

All of the variables included in the present model have been investigated at length in previous studies, but not in the same complexity as they are here. An attempt has been made to build a model parsimonious and inclusive enough to allow an investigation of possible interaction effects overlooked elsewhere in the Type A literature.

The Type A Behaviour Pattern

At the outset, this study requires a clear understanding of its central factor, the Type A Behaviour Pattern. In the past, the TABP has been inappropriately treated as a stable personality trait, rather than the pattern of behaviour that it truly is.

The Type A Behaviour Pattern first appeared as a construct in a medical setting (Friedman & Rosenman, 1960), and came to be recognized as an independent risk factor for coronary heart disease (CHD) [The Review Panel on Coronary-Prone Behaviour and Coronary Heart Disease, 1981]. It is only recently that Pattern A has

been widely recognized and investigated as a psychological construct (Matthews, 1982). Such recognition is consistent with the definition of the Type A Behaviour Pattern 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" [P.67] (Friedman & Rosenman, 1974).

This is not to suggest that the psychological dimensions underlying the Pattern A behavioural characteristics have been clearly identified. It does indicate, however, that the investigation continues, and ought not be confined to the association between the TABP and disease outcomes alone.

Much has been written about the environmental and personal stress factors which serve to elicit the TABP within the life-experience of given individuals. This study proposes that the TABP, in all its complexity and, in the presence of a combination of environmental circumstances, will have behavioural and/or psychological outcomes as well as, or perhaps prodromal to, medical-clinical outcomes such as CHD.

Price (1982) believes that when self-imposed standards for positive self-evaluation are not met by the Type A,

there may follow long periods of rumination, self-recrimination, a sense of worthlessness, and depression. These negative arousals could well be an immediate antecedent of an acute coronary event for many Type As (Lown, Desilva, Reich, and Murawski, 1980).

The immediate concern of this study, however, is not directly with CHD or disease outcomes of any kind. In fact, there appears to be only minimal evidence to suggest that the TABP is related to disease occurrences other than CHD (Keltikangas-Jarvin, 1987). Nonetheless, the association between the TABP and CHD plays a theoretically important role here. While many Type As may never develop CHD, and given that the dependent variables chosen for this study are potential mediators for risk of CHD, what happens in the intermediate term to those individuals who habitually manifest the TABP? This question can only be answered in the context of interactive models. The aim, therefore, is to make sense of mixed results from the associations among variables in the Type A literature, possibly obtained because, in a large number of studies, the real impact of the TABP has been averaged out.

Cohen (1982) notes that there are basically two different ways in which psychological factors are investigated as independent variables in health outcomes. One is by way of behavioural characteristics - like the

TABP - which is likely, under given circumstances, to render individuals vulnerable to certain affective states like depression, and to produce inadequate coping strategies. Glass (1977) provides an important example of this approach, having observed the Type A's tendency, when faced with failure, to switch to using strategies for coping that cannot possibly succeed.

This sense of uncontrollability can also result in behaviours (such as smoking or excessive alcohol consumption) that are potentially damaging to health. A second approach to the ways in which psychological factors impact on health end-points has centred on stressful life situations demanding increased coping efforts and resulting in negative affective states.

It would seem that these two approaches have generated separate research methodologies encouraging a somewhat artificial division of attention. This study adopts a multifactorial model of associations with the TABP at the centre, redolent of the Additive Burden hypothesis proposed by Dohrenwend et al. (1982). In this context, the consequences of habitually manifesting the TABP, and of undergoing certain stressful life experiences, could be highly interactive (Byrne, 1981).

On the one hand, an individual's Type A rating could influence whether stressful life events are encountered or avoided and, whether or not an appraisal of stress

is made. The TABP, then, might be expected to affect the outcome of the person-environment transaction (Price, 1982). It seems appropriate, therefore, to investigate life experiences and the TABP in combination in order to predict psychological health outcome.

The balance of this chapter is devoted to a consideration of the evidence for main effects among the variables of interest. Chapter two completes the theoretical and empirical overview by concentrating on interactive effects.

Smoking and Alcohol Consumption as Dependent Variables

In a review of the literature on tobacco, alcohol, and caffeine use, Istvan and Matarazzo (1984) report a moderately strong link between cigarette smoking and alcohol consumption. For example, epidemiological studies such as that conducted by Klatsky and Friedman (1977) have shown that people who consume large amounts of alcohol are also more likely to smoke.

With reference to the sparse literature on the TABP and smoking and alcohol consumption, results from one study (Spicer et al. 1981) showed no direct relationship. This finding may be explained, in part, because of the way in which the TABP was measured in this study. However, the same authors did discover an interaction effect of stress on the relationship between Type A per-

sonality and smoking. This result further encourages inclusion of the TABP in its global complexity, and adoption of a statistical analysis strategy which reveals any interaction effects.

Epstein and Jennings (1986) highlight an hypothesis which links stress and smoking. They suggest that smoking alters the perception of environmental and bodily cues, leading to a dissociation between bodily state and environmental demand. This notion seems especially plausible in the context of the TABP when considered in association with Glass's (1977) finding about Type As. He found that Type As tend to suppress subjective states, such as fatigue, that might interfere with a task performance. It is possible, then, to conceive of any dissociation experienced by a smoker, as an attempt on the part of an individual, to focus on particular tasks without distraction (Epstein & Jennings, 1986).

Regarding the pairing of tobacco smoking and alcohol consumption, Istvan and Matarazzo (1984) provide, among others, two plausible explanations for this phenomenon. First, it may be that substance use patterns are linked by reciprocal activation mechanisms, with the use of one substance acting as a cue to elicit use of the second substance. Second, the relationship linking these behaviours may not involve the role of direct reciprocal processes between consumption behaviours at all. It

may be that a paired use of tobacco and alcohol is simply incidental if each, acting independently, has been evoked by the same situational factors. It is these 'situational factors' - to be examined in detail in Chapter two - which are hypothesized to play a vital interactive role for the Type A in relation to any non-medical health outcome.

Depressive Symptomatology as a Dependent Variable

A key hypothesis in this study is that males displaying the TABP under are more likely to manifest depressive symptomatology, as distinct from clinically defined depression. It is necessary, then, to consider what is already known about the TABP and affective outcomes.

The standard definition of the TABP as an 'action-emotion complex' already hints at the role of an affective element within the construct. Booth-Kewley and Friedman (1987), in their review of the psychological predictors of heart disease, arrive at some interesting, if tentative, conclusions about the chronically activated Type A. They suggest that rather than the traditional picture of the Type A as a competitive, time-urgent, hard-driven individual, a truer picture probably includes the presence of one or more negative emotions - for example, depression, anxiety, anger, and frustration - either alone or in combination. The same

authors go on to conclude that the activated Type A reflects a maladapted personality with certain psychological attributes such as depression, in addition to those attributes classically associated with the TABP.

Price (1982) had previously considered, if only briefly, the potential importance of the TABP as a determinant of affective problems. She cites psychological depression as the second major posture or state associated with the activated TABP, after behavioural immoderation. Having acknowledged the general oversight in the literature with respect to depression and Type A, Price (1982) places responsibility at the door of those who have focussed Type A research on the American male. The traditional hard-driving, aggressive, competitive image associated with this population, she argues, is far removed from a representation of depression, a state often associated with weakness, submission, and capitulation. It seems likely that this argument is valid for the New Zealand male population, a large sample of which provides the data for this investigation.

This social role issue is further complicated by the fact that depression has been, and still is, more commonly associated with women. Conversely, it is less likely to be reported by the Type A male who has been

characterized as an individual who is preoccupied with the need to prove himself, achieve a lot, and to do an exceptional job at whatever he undertakes (Price, 1982). It is interesting, therefore, to discover that Spicer and Hong (1988) did find a relationship between hopelessness and the TABP (assessed using the Framingham Type A Scale) in women.

Moreover, Dimsdale, Hackett, Block, and Hutter (1978) found that the TABP, assessed by the Jenkins Activity Survey (JAS) Form B, correlated ($r = .18$, $P < .008$) with depressive mood measured according to the Profile of Mood States (POMS). Chesney et al. (1981) highlight the confusion that results in the literature when the TABP, identified by some measures, does correlate with certain distress variables, and with other measures, does not. These authors reported a JAS classified Type A - depression Pearson's correlation of $r = .10$. While, therefore, Spicer et al. (1981) found no relationship between Type A and depression, once again this may have occurred because of the way Type A was measured (using the Structured Interview). Ultimately, Chesney et al. (1981) conclude that correlations between the various self-report Type A scales and the Structured Interview method were notably low.

In her discussion of the TABP and depression, Price (1982) goes on to suggest that the Type A male is, in

reality, 'propelled' into a depressed state, given the right environmental conditions. A consideration of these conditions will be offered later in this chapter, and identified from an interaction point-of-view in chapter two. At this point it is appropriate to examine the utility of the TABP.

The Utility of the TABP

In order to understand why it is that some Type As are likely to be propelled into a depressed state, it is necessary to consider the personal 'utility' of the TABP.

Price (1982) has proposed that the TABP is the actions persons engage in to prove their personal self-worth, an hypothesis alluded to by Matthews (1982) in an overview of uncontrollability and failure experiences for Type As who attempt to exert control over environmental events. Glass (1977) discovered that Type As, consistent with his uncontrollability hypothesis, appeared to lose faith in their ability to exert environmental control after a minimum level of failure to do so on specific tasks. And when failure seemed assured, these same people switched to using strategies for control that could not possibly succeed. Strong support for this theoretical view emerges in the results of a study by Evans and Fearn (1985), who see the core element of

the TABP as an overdeveloped concern with the exercise and maintenance of control over potential threatening events. In this context, the results of a study by Chesney, Ward, Black, Swan, Chadwick, and Rosenman (1979) are of particular note.

Since Type A behaviour correlates with such characteristics as work-orientation, dominance, and autonomy, Chesney et al. (1979) were interested to find if there was an environment that fits the Type A personality and another environment that fits the Type B personality. The sample population employed in their study consisted of 385 healthy adult male volunteers between the age of 23 and 62. All were administered the Type A Structured Interview and a battery of questionnaires including the Work Environment Scale (WES); the State-Trait Anxiety Inventory (STAI); the Eysenck Personality Inventory (EPI); the Symptom Distress Checklist (SCL-90); and a Job Dissatisfaction Scale developed for the study.

Results of self-reported symptoms demonstrated no significant differences between Type As and Type Bs on any of the measures of psychological distress. This result confirmed a clinical observation that there was little direct relationship between the TABP and affective distress (Rosenman, 1978).

However, results from the WES Control subscale provided a different picture. Type Bs perceived considerably

more external control of their work environment than did Type As. As opposed to the Type B, the Type A person tended to make his own work rules and to work under less supervision. The implication is that the Type A was in control. Chesney et al. (1979) claimed that the control factor presented them with the best opportunity for investigating the person-environment fit as it related to the TABP. They further discovered that the lack of behaviour pattern-environmental control fit was associated with increased psychological distress.

Chesney, Black, Chadwick, and Rosenman (1981) confirmed the finding of Chesney et. al (1979) in a study of the psychological characteristics of 384 adult males. Each subject had been classified Type A or Type B by way of the Structured Interview, as well as the Jenkins Activity Survey (JAS), the Activity subscale from the Thurstone Temperament Schedule, the Framingham Type A Scale, and the 20-item adjective checklist Type A scale. Subsequently, subjects were given a battery of psychological measures.

Results showed that although Type A subjects had significantly higher scores ($P < 0.001$) than Type B subjects on various sub-scales of the Adjective Check List, Type A and B subjects did not differ on measures of psychological distress. This included the EPI Neuroticism subscale; the Anxiety, Depression,

Somatization, and Interpersonal Sensitivity SCL-90R subscales; and the State and Trait Anxiety subscales of the STAI.

Another noteworthy finding for the purposes of this present study arises from an investigation conducted by Byrne and Rosenman (1986). The authors selected a random sample of 593 male employees (all volunteers) from a single British government organization, and all free of physical disease as confirmed by medical examination. Among assessment instruments used were the Structured Interview (SI) measure of the TABP, and a series of three emotional distress and discomfort scales: the Hopkins Check-list (SCL90), the State-Trait Anxiety Inventory (STAI), and the Eysenck Personality Inventory (EPI).

Results showed that SI -defined Type As reported significantly higher levels of depression (and anxiety) than those defined as Type B. However, neuroticism is also commonly associated with the presence of affective distress. Because of the associations between measures of the TABP and the neuroticism scale of the EPI, relationships between the TABP and emotional discomfort were reexamined by the authors, while controlling for neuroticism. In this case, the effects of SI categories on measures of emotional discomfort disappeared for the Depression Scale of the SCL-90.

Byrne and Rosenman (1986) conclude that insofar as depressed mood is associated with the TABP it can be accounted for largely by the simultaneous action of neuroticism. However, the authors claim that their data join those from a growing list of studies linking the TABP directly with some experience of emotional discomfort. At the very least it would seem that the continued expression of the TABP does not constitute a positive affective experience.

Having referred to a somewhat confusing section of the literature which suggests some association between the TABP and negative affect, it is now appropriate to consider stress as an environmental trigger for Pattern A. This is consistent with the assertion that the Type A individual requires 'demand' and 'challenge' as stimuli to elicit the distinctive TABP (Kirmeyer & Biggers, 1988).

Life Events and Workload as elicitors of the TABP

In this study, the TABP is investigated a central factor in a model linking stress with depressive symptomatology, and smoking and alcohol consumption as problematic health behaviours. One suggestion linking the TABP and stress presents the latter as the necessary elicitor of the former, an idea clearly relevant in terms of main effect relationships.

Over the years researchers have attempted to discover if there is indeed a link between the TABP and a variety of stress variables. Byrne (1981) provides evidence to support the argument that Pattern A is associated with the frequency of stressful life events reported as occurring in the twelve-month period prior to a major health outcome. The association was found to be such that the more strongly manifest the TABP, the greater were the number of life events that the Type A subject appeared to encounter. It was also found that Type As are more likely than Type Bs to perceive the emotional impact of these events as negative.

Byrne and Rosenman (1986) reported similar results in correlations between self-report measures of the TABP and measures of life events. Although these relationships were modest, they did indicate a tendency among Type As both to encounter a higher total of life events, and to accumulate distress associated with those events, in excess of those individuals classified Type B.

As a corollary to findings such as those reported above, Hamberger and Hastings (1986) reflect a generally accepted position when they suggest that the TABP is not manifested in chronic arousal. Rather, it is thought to emerge and become pathogenic in reaction to

specific challenges posed by environmental events and situations. This is a critical assertion for the present investigation.

In this context, it is as well to acknowledge that stress, in itself, is not a simple variable but a system of independent processes related to personal factors in the receiver. These personal factors appear to mediate the frequency, duration, intensity, and type of psychological response to a stressor (DeLongis, Folkman, & Lazarus, 1988).

Cohen (1982) acknowledges several different hypotheses about which stress factors are most likely to lead to ill-health: (1) situations that involve loss, such as bereavement, and events that result in the loss of important gratification, sources of support, or reinforcement (loss events); (2) an accumulation of diverse life stresses and events requiring readjustment (change events); and (3) the occurrence of life events which the individual appraises as stressful (stress-appraised events).

As is often the case when investigating people in a real world, it is likely that all of these variables are implicated in their relationships with health outcomes. This expectation is reflected in the choice of factors included in the present model. They include

change and loss events with subjective affective ratings - all in the context of general and work-related life circumstances. Work events are mentioned here advisedly, and will be addressed in the next section.

Job stress and the TABP

Friedman and Rosenman (1974) and Jenkins (1975) reached some interesting conclusions about the work habits of Type As, based on a large number of clinical interviews with men. Results showed that Type As (1) work long, hard hours under deadline pressures and conditions of overload; (2) carry work home and show an inability to relax; (3) often cut holiday and leisure times short to return to work; (4) constantly compete with themselves as well as others, setting high standards of productivity they seem driven to maintain; (5) feel frustrated in the work situation; (6) are impatient and irritable when it comes to the work efforts of subordinates; and, (7) feel misunderstood by their superiors (Burke, Weir & DuWors, 1979).

The descriptions given above suggest that the TABP may exert influences on the sources of stress an individual is exposed to at work, as well as on any resulting outcome. In particular, it may be that Type As, because of their propensity to 'work', attract higher workloads

or, at the very least, perceive themselves as experiencing higher workload. Indeed, Spicer et al. (1981) did discover an association between heavier workload and both Type A personality and Type A behaviour.

In summary, then, it seems there is evidence available to suggest that the TABP is related, in particular, to both a high total of life events and high workload (Byrne, 1981; Byrne & Rosenman, 1986; Spicer et al. 1981). What is more, the hard-driven behaviour common to individuals who display Pattern A makes special sense of these findings. The expectation is that these people are likely, on average, to encounter a greater range of life experiences, both in the personal and job-related domains, than their Type B counterparts.

The TABP in its Social Context

It is clear enough from its definition that the TABP, elicited by some threat or challenge from the environment, is manifested by the individual within some social structure or social context.

Within the wider literature addressing social support and its types, House and Kahn (1985) define social structure as a construct which, when measured, reflects the existence, quantity, and type of social relationships which a person has, and which is reasonably easy to measure. Such social structural measures are

generally considered to supply objective characteristics of social networks and therefore an indicator of 'embeddedness' in a social system. The implication that follows identification of the existence of a social structure is that the individual is - to some degree or other - well-placed to receive feedback and support from others that helps form self-identity and feelings of stability, predictability, and control. As a result, it is possible to ask whether number and form of social relationships influence health.

Orth-Gomer and Unden (1987) reviewed a number of social support instruments potentially applicable in population studies. In the course of this review, they provide evidence which suggests that the frequency of social contacts, number of available persons in a network, and the amount of social activity, all have a substantial effect on health and survival. The assumption is that the chance of receiving qualitatively effective social support is greater if the individual's network is more extended, has a larger number of members, and gives the recipient more natural possibilities for social contact.

In a six-year follow-up study, Orth-Gomer and Johnson (1987) provide another relevant finding for the purposes of this study. The authors examined the relationship between social network interaction and total

and cardiovascular mortality in 17,433 Swedish men and women between the ages of 29 and 74. They found that low social support, as indicated by a relatively low level of social interaction and few social ties, was associated with an excess CHD mortality risk of approximately 50%, after adjustments for the effects of age and sex.

Why is it that social support appears to be such a vital commodity in a person's life? Cohen (1988) highlights two important potential effects of membership in a social structure for individuals in the face of stress: (1) the stress-buffering effect - social environmental factors have the potential for moderating the impact of stress, therefore working as a 'buffer' by decreasing vulnerability and increasing resistance to negative health endpoints. (2) The alternative or main-effect - social interaction and social support are fundamental human needs, therefore the absence of these crucial factors, social isolation, may be a stressor in itself. In other words, social resources have a beneficial effect irrespective of whether persons are under stress or not.

Implied in both stress-buffering and main-effect hypotheses is the notion that support is linked to health outcomes through behavioural and/or biological processes. In the case of the buffering effect, support

is expected play a moderating role in any association between the TABP and depressive and problematic outcomes. This phenomenon will receive more attention in chapter two.

Stress as a loss of social support

As has already been implied, an important issue in this study touches on the fundamental distinction between support - however it is operationalized - and stress (Gottlieb, 1983). It is critical to distinguish between the psychological distress resulting from the loss of social support, and the distress experienced by those who lack, or have little access to, a social structure. In other words, distress and ill-health produced by stressors involving losses from a social structure ought to be disentangled from the negative outcomes due to levels of ongoing support that are insufficient to buffer stress.

Thoits (1982) has observed that stress and support are neither operationally nor conceptually independent of each other. Many life changes are actually losses or breaks in social ties. And so too, many events may seriously disrupt, distort, reduce, or otherwise change existing network relationships. The extent to which life events and social structure overlap could severely hamper the ability to assess their relative impacts on

health outcomes. Any attempt to disentangle these two variables can only be effective where appropriate psychosocial measures are available. The issue is addressed in the present study where data is available reflecting loss of social relationships - the death of a spouse, a family member, or a close friend; occupational events, including loss of job, and retirement; divorce or marital separation, and other unavoidable but time-limited separation from spouse or significant other. Distress due to inadequate membership in a social structure is treated as a function of the psychosocial asset 'number of close friends'.

Having addressed the issue of stress, support, and a 'loss-index', there are still elements in each of these factors that could be problematic. This in spite of adequate measures for each.

The Type A and Significant others

There is a variety of evidence to suggest that Type A individuals are less embedded in a social structure than their Type B counterparts. For example, as Price (1982) points out, because employed Type A males spend a disproportionate amount of time engaged in work-related activities, the social influence of their immediate family members may be expected to be small by comparison with Type Bs.

There is also some evidence to suggest that the spouses of Type A males are often seen by their husbands as 'stress absorbers'. And as far as their children are concerned, Price (1982) reports that many extreme Type A men commonly refer to their adolescent children as a major source of chronic stress.

Number of close friends is the single element of social structure investigated in this study. The assumption is that a man with more rather than fewer close friends has more access to supportive interpersonal relationships. However, this general assumption stands in marked contrast to the Type A's friendship profile. Affection and intimacy appear to be rare features in Type A men. Friendship, and close friendship in particular, has been characterized by Type As as an opportunity for competition. While a friend may make a good sporting companion or conversation partner, there is no evidence to suggest exchanges about personal concerns or sources of stress (Price, 1982).

The TABP, therefore, claims special attention with regard to social support. In her cognitive social learning model of Type A, Price (1982) has suggested that proving self-worth is an essential function of Pattern A. According to her model, the Type A is characterized as relying excessively on feedback from

others for a sense of esteem. While theory predicts a positive response to social support from the Type A who depends on feedback from others for the maintenance of self-esteem, empirically, there seems to be little support for this expectation. Indeed, two recent studies (Seeman & Syme, 1987; Blumenthal, Burg, Barefoot, Williams, Haney, & Zimet, 1987) found no significant relationship between the TABP and social network structure. It might have been expected that the Type A, ahead of many others, would positively seek out social support. On the other hand, a closer look at the Friedman and Rosenman (1974) definition of the TABP suggests that the Pattern is hardly facilitates easy membership in an adequate social structure.

Williams, Haney, Lee, Kong, Blumenthal and Whalen (1980) highlight the uneasiness of the Type A-social support phenomenon in a study which shows relationships between atherosclerosis and both the TABP and hostility. The Type As in their sample, who tended to score higher on the Hostility Scale, considered others to be bad, selfish, and exploitive. It would seem, therefore, that the Type A's competitiveness and aggressiveness mitigate against a final satisfying fit between a need for social support and chances that it will actually be forthcoming.

Friedman and Rosenman (1974) suggest that Type As demonstrate a virtual absence of satisfying interpersonal relationships. Rather, they appear to place great store in independence as a prerequisite for achievement and self-efficacy. The irony of this situation is inescapable.

Smith and Rhodewalt (1986) also refer to Type As and their interpersonal relationships. They suggest that Type As exacerbate the stressfulness of their lives through their interactions - or lack of them - with others, and their use of a stress-engendering personal style. Continuing the consistency in findings, the results of several other studies (Burke, Weir & DeWors, 1979; Keegan, Sinha, Merriman & Shipley, 1979; Kelly & Houston, 1985) even suggest a picture of greater marital discord for Type As than for Type Bs.

Taken together, theory would suggest that the Type A man is likely, at the very least, to have fewer closer friendships than his Type B counterpart. While it might have been expected that the Type A person would find a firm place in some social network, if for no other reason, than to find the feedback and affirmation he craves, this expectation is without empirical support.

In this chapter, an overview of the relevant TABP literature has been provided. It has highlighted evidence

for and against relationships between Pattern A and the variables of interest. The overview process has, to some extent, been somewhat confusing, owing largely to the mixed results that have emerged from so many studies. In the end, two important and problematic issues stand out. The first concerns the use of different measures for the TABP, and the second, the tendency among some researchers to adopt a relatively simple strategy in the search for significant associations between the TABP and variables of interest.