

Health habits, type A behaviour and job burnout

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This study examined the effects of health habits and type A behaviour on psychological health outcomes in the face of daily life stress. Measures of the experience of life stress, health habits, type A behaviour, job burnout and psychological distress were collected for 146 employees at the UCLA Medical Centre. Analyses of covariance revealed that health habits contributed significant main effects to psychological distress but not job burnout. Type A behaviour, but not life stress or health habits, directly affected both job burnout and psychological distress. The implications of the research for employee health programmes are discussed.

Keywords: health habits, job burnout, type A behaviour, life stress, psychological distress.

Introduction

In recent years, considerable attention has been given to the role of individual variables in the stress-illness relationship (Johnson and Sarason 1978, Haynes *et al.* 1978, Antonovsky 1979, Kobasa 1979, Pardine *et al.* 1982). Of particular value have been studies which have considered the possible effects of two or more individual variables on psychological and physical health outcomes.

This study investigated the effects of the type A behaviour and health habits (e.g. diet, sleep, exercise, hygiene) on the psychological health status of employees working in the human services. Data on these variables were obtained from employees for whom information concerning daily life stress and psychological distress symptoms was also available.

A great deal of attention has recently been focused on work stress and type A behaviour. Type A behaviour has been shown to contribute to the development of coronary heart disease (CHD) in both retrospective and prospective studies (cf. Brozek *et al.* 1966, Rosenman *et al.* 1975, Jenkins 1976).

This overt style is characterized as being multi-dimensional and to be comprised of impatience, a chronic sense of time urgency, enhanced competitiveness, aggressiveness and hostility (Rosenman 1978). It is important to emphasize that type A behaviour is neither uniform nor all-inclusive for all individuals. As such, it represents learned behavioural responses of individuals to perceived stressors rather than dichotomous personality traits (Matthews 1983).

Of importance to the workplace are recent findings suggesting that type A behaviours are related to physical and psychological health outcomes other than CHD (e.g. job burnout, depression, anxiety). For example, Kobasa *et al.* (1983) demonstrated that although physical illness and type A behaviour were unrelated, overall under conditions of high life-events stress, hardy type As experienced the least amount of physical illness when compared to other groups. In the same vein, Suls (1979) demonstrated that negative life-events stress was significantly associated with symptoms of psychological distress in individuals

expressing type A behaviours. Additional support for an association between type A behaviour and health outcomes, other than CHD, has been cited in three recent studies (Nowack and Hanson 1983, Woods and Burns 1984, Mayes *et al.* 1984). Although each of these studies utilized different measures of type A behaviour and physical and psychological health outcomes, significant relationships between these variables were consistently reported. Given these findings, one expressed purpose of the present study was to replicate and extend earlier work by investigating the relationship between type A behaviour and several different measures of psychological distress.

In this study, type A behaviour was assessed via the *Framingham Scale* (Haynes *et al.* 1978). This measure of type A is neither claimed to be the best nor only method available (Matthews 1983). In contrast to some other measures, relatively little is known of the psychological correlates of the *Framingham Scale* (Smith *et al.* 1983).

Other individual variables hypothesized to moderate the stress-illness relationship are daily health habits such as exercise, diet, sleep, substance use and abuse, and personal hygiene. The strongest available evidence for such relationships is for CHD and other cardiovascular conditions. The majority of these studies suggest that regular health habits function to minimize the risk of CHD (Epstein *et al.* 1976, Paffenberger and Hale 1976, Farquhar 1978, Horowitz *et al.* 1981, Thoresen 1981, Kobasa *et al.* 1983). The evidence that daily health habits buffer individuals from other physical and psychological health outcomes is less clear, although they have been hypothesized to function in that fashion by a number of researchers (cf. Rosenman *et al.* 1975, Weiner 1977). Clarifying the role of employee health habits in the stress-illness relationship thus appears worthy of further investigation.

Few of the existing studies have attempted to investigate the relationship between a cumulative measure of health habits and psychological health. Recent research has therefore focused on the development of such an index of daily health habits, the *Self-care Inventory* (Pardine *et al.* 1982). This inventory measures five areas of daily health habits already shown to be associated with a variety of health outcomes: (1) eating and nutritional practices; (2) rest and sleep practices; (3) hygienic practices; (4) substance use and abuse; and (5) exercise practices. In several studies it has been shown to predict physical illness and depression in a college student population (Pardine *et al.* 1982). How employee health habits will effect two specific health outcomes, job burnout and psychological distress is a focus of the present study.

In summary, this study examines the effects of stress, type A behaviour and health habits on the psychological health of employees working in human services. It is hypothesized that individuals practising regular health habits will experience less job burnout and psychological distress than those more negligent in their health practices. Consistent with current research, it is also hypothesized that the Framingham type A measure will be associated with both measures of psychological health status.

Method

Participants and procedure

Two identical questionnaires were randomly distributed to 300 human service employees at the UCLA Medical Center at the beginning and end of a four-month period. Respondents were told that their participation was voluntary and would not influence their job in any way.

During the first data collection period, 196 (65%) of the questionnaires were returned. During the second data collection period, 146 of the original 196 were returned (77%). There was little reason to believe that this relatively low response rate strongly biased the

study findings given the homogeneity and similarity of the human service positions of the sample. The final sample of 146 respondents were between 20 and 55 years old, college educated, and mostly female (67.7%).

Instrumentation

Type A behaviour was assessed via the ten-item *Framingham Scale* (Haynes *et al.* 1978). This scale predicted the incidence of coronary heart disease in subjects ($N=1822$) classified as being free from any symptoms at the beginning of the year Framingham CHD Study. Type As classified by the *Framingham Scale* can be characterized as dissatisfied and uncomfortable with the competitiveness, negative effect and job pressures that their lives entail. In previous studies, this scale has shown an adequate internal consistency (Cronbach's alpha) of 0.70 (Haynes *et al.* 1978).

Psychological distress was assessed by the *Hopkins Symptoms Checklist* (Derogatis *et al.* 1974). This measure has shown a moderately high internal consistency (Cronbach's alpha) of 0.86, test re-test reliability of 0.75 over a six-month period, and growing construct and criterion-related validities with normal adult samples (Derogatis *et al.* 1974). This 58-item scale has been repeatedly factored into five distinct dimensions including anxiety, depression, somatic complaints, interpersonal sensitivity and compulsive thoughts.

Life stress was measured using the 117-item *Hassles Scale* (Kanner *et al.* 1981). This scale lists the minor irritants of daily living including those related to the areas of work, family, friends, the environment, practical considerations and chance occurrences. This scale has demonstrated adequate test re-test reliability (0.68) over a four-month period. To date, this scale has been found to correlate more strongly and account for more variance in health outcomes than the life events measures of stress used in a variety of other studies (Kanner *et al.* 1981, Monroe 1983).

The construct of burnout has been defined and conceptually linked to the stress-illness relationship in a number of recent studies (for example, Maslach and Jackson 1981). Burnout has been defined as being an outcome of stress characterized by self-perceptions of emotional exhaustion, cynicism, negativity, low commitment, fatigue, low morale, resistance, detachment and low productivity. Burnout was measured using the *Maslach Burnout Inventory* (Maslach and Jackson 1981). This inventory assesses the three burnout dimensions of emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). Estimates of internal consistency (Cronbach's Alpha) range from 0.90 for

Table 1. Intercorrelations among the demographic and independent variables assessed at time 2 (end of study).

Variables	1	2	3	4	5	6
1. Age						
2. Education	0.11					
3. Number supervised	-0.04	0.17*				
4. Hours worked	0.01	0.01	0.17*			
5. Life stress	0.05	-0.01	-0.06	-0.11		
6. Health habits	0.10	-0.12	0.03	-0.07	-0.34*	
7. Type A	0.01	0.09	0.15*	0.15*	0.25**	0.24**

Note: * $P < 0.05$. ** $P < 0.01$.

EE, 0.79 for DP, and 0.71 for PA. Test re-test reliabilities range from 0.65–0.82 for these scales (Maslach and Jackson 1981). A cumulative measure of burnout was derived in this study by summing the *Z* scores over its three dimensions.

Health coping habits were assessed via the 22-item *Self-Care Inventory* (Pardine *et al.* 1982). This scale provides a cumulative measure of daily health behaviours in five areas already shown to be independently associated with a variety of health outcomes. This scale has shown adequate internal consistency (Cronbach's Alpha) 0.76 and test re-test reliability (0.66 over a four-month period) in recent studies (Pardine *et al.* 1982). It should be pointed out that these are early studies underscoring the potential viability of such an approach for the measurement of cumulative health habits. Clearly more conceptual and psychometric refinements are required.

Results

Type A, health habits and demographic variables

Demographic variables of interest to this study included age, gender, education, number of people supervised, and number of hours worked per week. Table 1 summarizes the intercorrelations between these and the independent variables at time 2.

A significant correlation between education and number of people supervised was observed ($r(146) = 0.17$, $P < 0.05$). A similar relationship was found between number of hours worked and number of people supervised ($r(146) = 0.17$, $P < 0.05$). Finally, type A behaviour was significantly associated with both of the above variables (both $r_s(146) = 0.15$, $P < 0.05$). This finding is consistent with the underlying achievement striving facet of type A behaviour in the workplace (Mettlin 1976, Glass 1977). Type A behaviour also appeared related to the report of life stress ($r(146) = 0.25$, $P < 0.01$).

Because of a statistical overlap between the independent and dependent measures, a more sophisticated approach to the main data analyses was therefore taken.

Table 2. Summary of analysis of covariance: effects, habits, and type A behaviour on psychological distress.

Source of variation	<i>F</i>	d.f.	<i>P</i>
Covariate†			
Psychological distress	208.26*	1	0.00
Main effects			
Stress	2.28	1	n.s.
Health habits	7.64*	1	0.01
Type A	4.98*	1	0.01
Two-way interactions			
Stress × health habits	2.23	1	n.s.
Stress × type A	1.78	1	n.s.
Three-way interactions	0.12	1	n.s.

Note: *N* = 146.

† The covariate was measured at time 1. The dependent variable was psychological distress measured at time 2.

Table 3. Summary analysis of covariance: effects of stress, health habits, and type A behaviour on job burnout.

Source of variation	F	d.f.	P ₁
Covariate†			
Burnout	132.32	1	0.00
Main effects			
Stress	0.82	1	n.s.
Health habits	1.19	1	n.s.
Type A	3.83	1	0.05
Two-way interactions			
Stress × health habits	0.46	1	n.s.
Stress × type A	1.67	1	n.s.
Type A × health habits	1.34	1	n.s.
Three-way interactions	0.41	1	n.s.

Note: N=146.

† The covariate was job burnout measured at time 1. The dependent variable was job burnout measured at time 2.

Type A, health habits and psychological distress

To test the hypothesis that type As practising regular health habits would experience less psychological distress than others, a three-way analysis of covariance was performed with the independent variables measured at time 1 and the dependent variable being psychological distress measured at time 2. Psychological distress, measured at time 1, was used as the covariate. Table 2 summarizes the results of this ANOVA with distributions of the independent variables dichotomized at the medians to form high-low groups (life stress, median = 119.23; type A, median = 0.56; health habits, median = 70.72).

Both type A behaviour and health habits contributed significant main effects to psychological distress. Life stress, measured as daily hassles, did not have a significant main effect. Additionally, there were no significant interactions.

Type A, health habits and job burnout

A subsequent three-way ANCOVA was performed with the independent variables and covariate again measured at time 1 but with the dependent variable being job burnout measured at time 2. Table 3 summarizes the results of this analysis.

As in the previous analysis, type A behaviour had a significant main effect. However, neither stress nor health habits directly affected self-reported job burnout. Again, no significant interactive effects were observed.

In both ANCOVA analyses, type A behaviour directly affected psychological symptomatology which is consistent with the hypotheses of this study. Employees expressing type A behaviours experienced *greater* job burnout and psychological distress over the four-month study period.

Discussion

The results of this study, based on ANCOVA, tend to support a positive association between type A behaviour and possibly health habits, and psychological health outcomes.

However, these results must be viewed cautiously for three reasons: due to their reliance on self-report methodology, the use of only a single measure of type A behaviour, and possible overlaps between the independent and dependent measures. Such an overlap in the self-report measures (life stress and psychological distress; $r(146) = 0.50, P < 0.01$) may confound the true relationship between these variables.

In earlier reviews of the type A literature, it is pointed out that the various assessment techniques used are likely to be measuring conceptually different but overlapping dimensions of type A behaviour (Matthews 1983, Mayes *et al.* 1984). Previous research has shown a significant association between the Framingham scale and trait anxiety, which is a component of psychological distress (Smith *et al.* 1983). Thus the significant association between type A behaviour and psychological distress found in this study may be a result of the particular assessment method used. Future research using other type A measures (e.g. the Structured Interview and the Jenkins Activity Scale) should assist in clarifying this relationship.

The positive association between type A behaviour and psychological health is interesting because type A individuals tend to ignore and suppress somatic and psychological symptomatology of the type measured in this study (Schlegel *et al.* 1980). On this basis it might be argued that the true relationship between type A behaviour and psychological health status may be even stronger than demonstrated here.

As type A behaviour becomes further operationalized and the assessment techniques refined, it is hoped that the complex relationship between type A and health status will be more clearly delineated. Possibly, the different type A dimensions, assessed by various methods, will be shown to have specific effects on psychological health status while concurrently contributing to the etiology of coronary heart disease. Clearly, additional longitudinal research is warranted and such studies should employ multiple assessment techniques for each construct so that the interrelationships between measures can also be adequately analysed.

Employee health habits were significantly associated with psychological distress but not job burnout outcomes in this study. The lack of a main effect of health habits on burnout may suggest that this variable does not directly affect work related feelings of emotional exhaustion, depersonalization, and lack of personal accomplishment. These results are consistent with an earlier study on the relationship between health habits and burnout in students working part-time (Nowack and Hanson 1983). Thus this *cumulative* measure of health habits appears related to *specific* psychological health outcomes. However, collectively individual employee health habits (e.g. exercise, diet, hygiene, substance use and abuse, sleep) may contribute to a wider range of adaptional outcomes. Additional research studies and evaluations of existing employee health promotion programmes are needed to test this hypothesis.

An alternate explanation for the lack of a main effect is that the composite burnout measure used in this study (MBI) is weighted to assess cognitive rather than somatic complaints. Approximately two-thirds of the items in the MBI assess specific cognitions around depersonalization and lack of personal accomplishment. Only the items measuring the emotional exhaustion dimension of the MBI actually assess physical or somatic complaints. It could be argued that the composite burnout measure does not directly relate to health habits because the latter affects psychophysiological processes which are largely independent of the cognitions underlying the composite burnout measure.

Assuming the findings of this study can be replicated, several implications exist for organizations planning or implementing employee health promotion programmes. First, it appears that employees expressing type A behaviours are more likely to experience daily life

stress, and feelings of job burnout, and psychological distress. Efforts to assist such potentially-high-risk individuals may have individual and organizational benefits.

Second, it is possible that organizational health promotion emphasizing habit change programmes (Insull 1973). On the basis of the present study, psychological distress, might be with specific health outcomes in mind, and possibly concentrate on particular habits. For example, programmes developed to minimize coronary risk factors might want to emphasize smoking cessation specifically, hypertension screening, and nutritional awareness programmes (Insull 1973). On the basis of the present study, psychological distress might be amenable to such an approach.

It would be particularly helpful to replicate this study using a longitudinal design and involving multiple health outcome measures. Such an approach may help further delineate the role of specific health habits in the stress-illness relationship.

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