

PERSONALITY FACTORS AND
THE OUTCOME OF TREATMENT
IN ESSENTIAL HYPERTENSION

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SUMMARY

The thesis explores the relationship between personality characteristics, perceived life stress, and outcome of drug treatment for patients with moderately severe essential hypertension.

In the Introduction, attention is drawn to the hiatus which exists between personality studies of hypertensives on the one hand, and clinical drug studies on the other. An opportunity to assess a consecutive series of patients before drug treatment and after 12 months, provided a means of studying the possible relevance of personality characteristics to the clinical course under drug treatment conditions.

The Review of Literature includes an historical perspective in the two broad areas of Biological/Clinical Studies and Psychosocial Studies. Since psychological influences must be mediated via physiological mechanisms, modern concepts of pathophysiology such as neural control of renal mechanisms, are examined. A clinical perspective is gleaned by reviewing studies which demonstrate the effect of drug treatment on morbidity and mortality.

Regarding psychosocial factors, approaches reviewed include epidemiological, animal experimental, and human psychophysiological. There appears to be compelling evidence for the potential for psychosocial forces to influence cardiovascular functioning, although precise definition of an aetiological role in hypertension in humans remains elusive in this highly complex and intricate frontier of research. Psychoanalytically derived studies have long suggested that personality characteristics related to the modulation and disposition of aggression (submissiveness, paranoid traits) deserve close scrutiny.

Much of the psychosomatic literature is concerned with issues of aetiology and pathogenesis; in the clinical setting available to the author for the present study, it seemed more profitable to address the more circumscribed issue of the possible influence of selected psychosocial factors on the course of the illness, than to attempt to explore aetiological factors. Hypotheses derived from previous studies could still be tested in the treatment setting. Using blood pressure reduction as the criterion variable, it was hypothesized that the following groups of persons would have less satisfactory outcome:

- (i) persons with purportedly pathogenic traits of "submissiveness" or "suspiciousness".
- (ii) persons who perceived their current life situation (family, marriage, work) as intrinsically stressful.
- (iii) persons who anticipated negative effects from drug treatment.

Over a 3 year period, 75 patients were assessed by semistructured interview and questionnaires (Cattell's 16PF, and Kupfer-Detre System I and II) prior to beginning treatment; 71 completed diuretic therapy, 61 were able to be reassessed at 3 months, and 55 at the 12 month stage. Patients received one of four antihypertensive drugs (clonidine, methyldopa, oxprenolol, bethanidine) as well as a diuretic (cyclopentiazide); differences in outcome between the drug groups were not significant.

From findings depicted in the Results Section it is evident that the predictions were rather simplistic. While generally in the predicted direction, statistically significant correlations across as 3 phases (pretreatment, diuretic, combined drugs) were not seen between the dependent variable (percentage reduction in blood pressure) and the

predictor variables. Different psychosocial correlates were noted at different phases, and there were striking sex differences regarding specific psychosocial variables. For example, the "suspiciousness" trait appeared to be more telling in females, while "work stress" was clearly important among men.

In addition to the findings related to predictions, it was found that another personality characteristic (Factor A of the 16PF) which appears to reflect the "engagement-involvement" dimension of personality functioning, was a more significant predictor of blood pressure change (persons rating lower on "involvement" having better outcome) than either of the two personality traits studied predictively. A further literature search following this serendipitous discovery revealed a consistent theme within the psychophysiological literature regarding this characteristic, suggesting that low "involvement" may be an adaptive behavioural style in the face of an over-reactive pressor system. This theme has generally been overshadowed by that concerning the personality configuration related to aggression.

Other issues related to personality which emerged included "placebo" effects, compliance/non compliance with drug treatment, and decisions made by patients regarding life style changes during treatment. The major theme described above, together with these associated issues, point to a clear need for further integration of psychologically oriented approaches with those of clinical pharmacology and medicine, if further challenges of the modern epidemic of essential hypertension are to be faced.

The main areas wherein this thesis is considered to advance medical knowledge are:-

- (i) Relationships between specific psychological characteristics of patients with essential hypertension, and change of blood pressure before and during drug treatment.
- (ii) The evidence that different psychological variables are related to blood pressure change for different phases (a) pretreatment phase, (b) diuretic phase, and (c) phase of combined diuretic and antihypertensive drug treatment.
- (iii) The evidence that although blood pressure changes were similar for the sexes, psychological measures correlating with blood pressure change differed considerably between the sexes.
- (iv) Patients with a personality configuration of low "involvement-engagement" have a significantly better outcome over 12 months of treatment, than patients with the opposite characteristics of high levels of "involvement-engagement" in personal interaction. It is possible that this interactive style represents an adaptive behavioural strategy for a person with a hyper-reactive pressor system; those persons who cannot thus adapt are therefore exposed to higher levels of stimulation which may counteract the antihypertensive effect of drug treatment.