**International Journal of Academic Research and Development**
**ISSN: 2455-4197**
**Impact Factor: RJIF 5.22**
**www.academicjournal.in**
**Volume 3; Issue 6; November 2018; Page No. 210-212**

# A study on psychosocial processes of health behaviour change of essential hypertension and diabetes

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**Abstract**
The present paper deals a study on psychosocial processes of health behavior change of essential hypertension and diabetes. A growing body of research demonstrates that psychosocial factors play an important role in the development of hypertension. Cardiovascular epidemiology has established blood pressure, serum cholesterol and smoking as the most powerful and consistent predictors of coronary risk in middle age and older adults. Studies of children suggest that coronary risk factors are already present at early ages, but relatively little epidemiologic data exist on the coronary risk status of young adults, especially those who have recently completed physical growth as they begin to enter typical adult roles in this society, a phase characterized by changes in lifestyle and responsibility. The student becomes a worker, the single person a spouse and parent, with changes in eating, drinking, sleeping, and exercise.

**Keywords:** psychosocial, health behaviour, hypertension, diabetes

## 1. Introduction

Psychosocial factors, including Type-A personality, anger hostility and anxiety, have been implicated in the pathogenesis of cardiovascular disease. Abnormal sympathetic responses to stress may help explain the link between certain behaviour patterns and cardiovascular disease. Researchers have tested the hypothesis that in normal humans, Type-A personality characteristics are associated with exaggerated heart rate, blood presser and sympathetic nerve responses to mental and physical stress. They measured heart rate, blood pressure and muscle sympathetic nerve activity at rest and during stress in healthy normal subjects and concluded that abnormalities in sympathetic or cardiovascular reactivity were unlikely to be implicated in any excess of cardiovascular disease in people with Type A personality characteristics (Schroeder *et al.*, 2000) [1].

The changing nature of the stresses that challenge man's existence in modern civilization have sorely taxed his coping mechanisms. Stress is indeed a normal component of life, but at some times and in some individuals it can produce devastatingly adverse effects (Hordern & Wheatley, 1981; Nixon, 1982; Selye, 1974) [2-4].

Stress, Overt or Covert, may play a part in many organic and psychiatric disorders including ailments of affect, cardiovascular condition, sexual disorders, Premenstrual syndrome, menopause, geriatrics and sleep disturbances. Furthermore a number of organic illnesses may be adversely affected by stresses occurring in the patient's life and notable among them are asthma, gastrointestinal disorders, arthritis and dermatologic, condition, to mention a few (Wheatley, 1984) [5].

Tulloch and Pelletier (2008) [6], while examining the psychological issues in cardiac rehabilitation, have highlighted the importance of personality characteristics of individuals. Does personality matter after all? They examined this question. According to them, psychosocial distress such as anxiety, depression and anger has been linked to pathogenesis and prognosis of coronary artery disease (CAD). In addition to these acute emotional factors, long-standing personality traits have also been investigated to determine their respective influence on the progression of heart disease. The best known personality factor is the Type A behavioural pattern, which encompasses characteristics such as ambitiousness, aggressiveness, competitiveness, impatience, muscle tension, cynicism, hostility and an increased potential for anger. Individuals exhibiting Type A behaviour pattern struggle to achieve more in less time and if deemed necessary, will pursue their goal even if it requires opposing the efforts of others (Jenkins *et al.* 1979) [7]. While this behaviour pattern's connection to cardiovascular disease was initially supported, subsequent studies have failed to show a relationship. Instead, only parts of Type A behaviour pattern (i.e. anger/hostility) appeared to influence cardiovascular disease development. The mixed findings on Type A behaviour led to a decline in the interest of personality traits and their impact on cardiac health.

During the past few decades a new personality construct, Type D personality or "distressed personality" has surfaced as a potential moderator of the health status of cardiac patients. In the present study linkages between the personality factors of Type D personality (Negative Affectivity and Social Inhibition) and Type of Behaviour (Type A/Type B) with Essential Hypertension and Diabetes have been examined.

The Type A behaviour pattern made considerable sense as a potential risk factor for cardio-vascular disease, because the individuals fit the stereotype of the coronary-prone individual. For example, Type A individuals lead fast paced lives, working longer and more discretionary hours than do Type B. They are impatient with others peoples' "slow" behaviour, they are likely to challenge and compete with others especially

in circumstances that are only moderately competitive and they may suffer from free-floating (unfocused) hostility (Jenkins, *et al.* 1979) [8]. Their relations with others may be more strained and difficult and they may have trouble coping in situations that require slow, careful work that calls for a broad focus of attention (Matthews, 1988) [9]. They may suppress symptoms during times when they are working harder, and thus be unaware of the cues their body is giving them that they need to slow down (Taylor, 1999) [10].

Some experts now suspect that hostility is a social manifestation of cardiovascular reactivity and the likelihood of over-responding sympathetically to stressful circumstances Hostile Type A individuals appear to exhibit a weak antagonistic response to sympathetic activity in response to stress, suggesting that hostile individuals' reactivity to stress is not only greater initially but also may last longer. The fact that hostility may reflect underlying tendencies toward cardiovascular reactivity in stressful circumstances does not undermine or deny the importance of childhood environment in the development of hostility or the significance of the social environment in eliciting it. For example, to the extent that hostility reflects a genetically based underlying physiological reactivity, parents and children predisposed to reactivity may create and respond to the family environment differently. For reactivity to assume the form of hostility, particular environmental circumstances-such as parental childrearing practices or the interpersonal conflictual stressful circumstances that evoke hostile behaviour may need to be in place. Consequently, the reactivity/hostility relationship may be thought of as a biopsychosocial process, the understanding of which is continuing to emerge (Taylor, 1999) [10].

## 2. Objectives

The major objectives of the present study were

1. To investigate the significance of difference between Type A Vs Type B Normal (Healthy) subjects with regard to Negative Affectivity (NI) – the personality factor of Type D personality.
2. To find out the significance of difference between Type A Vs Type B Normal (Healthy) subjects with regard to Social Inhibition (SI) – The personality factor of Type D personality.

## 3. Hypotheses

On the basis of the trends reported earlier the following null-hypothesis were formulated. It was hypothesized:

(H-1) That there would be no significant difference in the average Social Inhibition (SI) Scores of Type A Vs Type B Hypertensive Patients.

(H-2) That there would be no significant difference in Negative Affectivity (NA) of Type A Vs Type B Normal/Healthy subjects.

## 4. Methodology

The present research was conducted on 200 subjects of 40 to 60 years of age. Out of these total 200 subjects 100 were normal/healthy (Control), whereas, out of the remaining 100 subjects half (50) were the patients of Essential Hypertension and half (50) were the patients of Diabetes Mellitus (Diabetes Type II). The selection of cases for the sample was done from amongst both male as well as female out patients taking regular treatment from doctors of different nursing homes/hospitals at Rewa. And the normal/control subjects were selected from amongst the common people of Rewa city. The selection of the subjects in both the above categories i.e. (Control and Experimental) was done on atrandom purposive basis without any preferences whatsoever. All the subjects were from middle class and educated background. Half of the subject in each category were males and half were females.

## 5. Results and Discussion

Further, analysis was done to see the significance of difference between the average Social Inhibition (SI) scores found for the above two categories of the Subjects. Table 1 and Figure 1 present the results so obtained. The findings clearly show that there was no difference in the averages of Social Inhibition (SI) scores of Type A Vs Type B Hypertensive Subjects. The Type A Hypertensives (M=11.38; SD=3.60) and Type B Hypertensives (M=11.96; SD=4.55) had approximately same amount of average Social Inhibition (SI) characteristic of Type D personality (t=1.16; p>0.05). This, confirmed the sixth hypothesis (H-6) that there would be no significant difference in between the average Social Inhibition (SI) characteristics of Type A Vs Type B Hypertensive patients.

**Table 1:** Showing the significance of difference between the Means of Social Inhibition (SI) Subscale Scores of the Hypertensive Patients with Type A Vs Type B Personality.

| S. No. | Type of Hypertensive Patients | N | M | SD | $SE_D$ | t | p |
|---|---|---|---|---|---|---|---|
| 1. | Type A Personality | 26 | 11.38 | 3.60 | 1.16 | 0.50 | > 0.05 Insignificant |
| 2. | Type B Personality | 24 | 11.96 | 4.55 | | | |

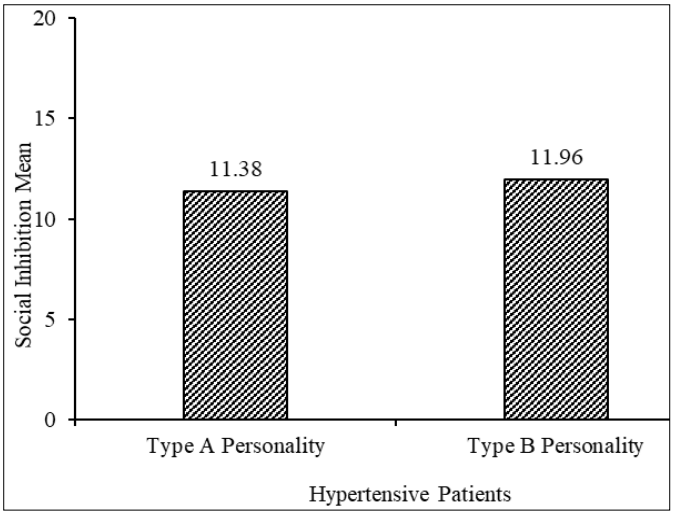


**Fig 1:** Showing the Means of Social Inhibition (SI) Subscale Scores of Hypertensive Patients with Type A Vs Type B Personality.

Table 2 and Figure 2 show the analysis of significance of difference between the prevalence of Negative Affectivity (NA) among the Control (Normal) Type A Vs Type B Subjects. The results showed that the Mean Negative Affectivity scores of Type A Control Subjects (M=16.14); SD = 3.56) and that of Type B Control Subjects (M=16.35; SD =

3.76) were more or less equal. There was no significant difference between the two (t=0.27; p > 0.05).This has confirmed the hypothesis seventh (H-7) that there would be no significant difference in the Negative Affectivity (NA) Type D personality characteristic/trait of Type A Vs Type B Normal/Control Subjects.

**Table 2:** Showing the significance of difference between the Means of Negative Affectivity among Normal Control Subjects with Type A Vs Type B Personality.

| S. No. | Normal/Control Subjects | N | M | SD | $SE_D$ | t | p |
|---|---|---|---|---|---|---|---|
| 1. | Type A Personality | 54 | 16.14 | 3.56 | 0.73 | 0.27 | > 0.05 Insignificant |
| 2. | Type B Personality | 46 | 16.35 | 3.76 | | | |

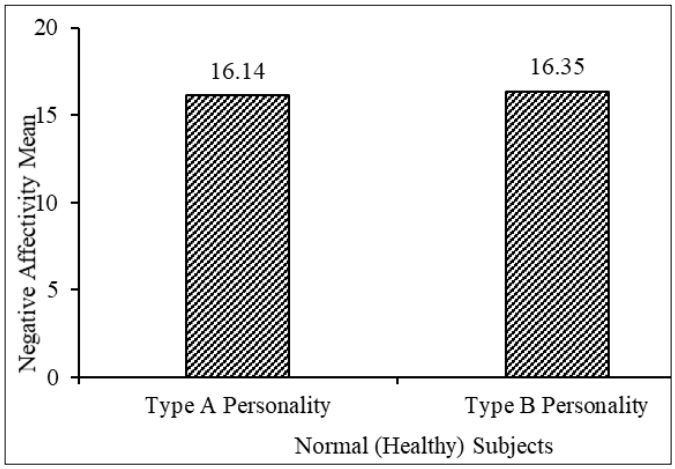


**Fig 2:** Showing the Means of Negative Affectivity (NA) Scores of Normal/Control Subjects with Personality Type A Vs Type B.

Social isolation and a lack of social support (Social inhibition) have been repeatedly identified as factors related to ill health and pre-mature mortality (House *et al.* 1988) [11]. It is not known whether social isolation can be ameliorated through professional interventions to a sufficient extent to reduce cardiovascular risk, but awareness of these factors may facilitate targeting of services.

Reasons why some cardiologists do not recognize the psychological risk factors may be " (i) Psychological factors are risk factors rather than inevitable causes; they vary widely in importance for different patients and will certainly not be apparent in every case; (ii) Psychological characteristics such as hostility may only be elicited under appropriate provocation. They are unlikely, therefore, to be expressed during a typical clinical consultation and (iii) There is a tendency to search for psychological explanations only for patients who do not have other clear risk factors such as hypertension, diabetes or smoking. This is why the present researcher has taken the hypertensive and diabetic subjects along with the control/normal subjects.

## 6. Conclusion

The critical importance of both bio-medical and Psycho-social factors, however, is clear. For example, although there is little evidence that individuals who have high hostility also have chronically high blood pressure or heart rate reactivity.

An alternative model that is, biopsychosocio model has been proposed. It incorporates not only the biomedical but also the psychological and social aspects of health. In this model health of a person is seen as a positive condition. Accordingly, the World Health Organization (WHO) has defined health as a state of complete physical, mental, social and spiritual well being and not mearly the absence of disease or infirmity (WHO).

## 7. References

1. Schroeder KE, Narkiewicz K, Kato M, Pesek C, Phillips B, Davison D, Somers VK. Hypertension. 2000; 36(5):830.
2. Hordern A, Wheatley D. Psychotropic drugs in the elderly. In : Wheztley D, ed. Stress and the heart. Second edition. Raven Press, New York, NY, 1981, 377-401.
3. Nixon PGF. Stress and the cardio-vascular system. Peactitioner./ 1982; 226:1589.
4. Selye H. Stress without distress. Lippincott, Philadelphia and New York, 1974.
5. Wheatley D. Psychological stress and cardiovascular diseases. Scand J Work Environ Health. 1984; 10:415-417.
6. Tulloch Pelletier H. Psychosocial issues in cardiac rehabilitation. Current Issues in Cardiac Rehabilitation and Prevention. 2008; 16:2.
7. Jenkins CD, Zyzanski SJ, Rosenman RH. Jenkins Activity Survey Manual. New York: Psychological Corporation, 1979.
8. Jenkins CD, Zyzanski SJ, Rosenman RH. Jenkins Activity Survey Manual. New York: Psychological Corporation, 1979.
9. Matthews KA. Coronary heart disease and Type A behavior: Update on and alternative to the Booth-Kewley and Friedman (1987) quantitative review. Psychological Bulletin. 1988; 104:373-380.
10. Taylor SE. Health psychology, Mcgraw Hill, New Delhi, 1999.
11. House JS, Landis AR, Umberson D. Social relationships and health. Science. 1988; 241:540-4.