DISCUSSION
Chapter-6

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The present research was aimed at investigating how stress variables influence the male and female cardiovascular patients and do the male and female CVD patients differ in their Type A behavior pattern. Coping strategies adopted by these patients in stressful situations have also been the focus of study.

The chapter prior to this one presented the results obtained after statistical analyses of data. In this chapter the results have been discussed in the light of the findings of earlier researches. In this context, contradictions in the present findings of this study and those of research done by others have been explained by invoking possible reasons for differences. The results have been discussed with all variables under study.

Gender, Stress Variables and Coronary Vascular Disease:

Analysis of data reveals that there are some stress variables where male and female cardiovascular patients differ. A significant difference has been observed on
stress variables- strained interpersonal relationships, demanding responsibilities, economic constraints, health related problems, adverse social situations, imagined threats to status and Prestige. Male cardiovascular patients experience more stress due to the strained interpersonal relationship, demanding responsibilities. Since male member in the family has to manage everything, economic constraints induce stress among them and therefore it is more stressful to male patients as compared to females. Marriage conflicts are major source of stress for both male and female patients but male patients have shown a higher trend. Though health related problems are stressful for male and female patients both but female patients experience more stress than men due to health problems. Since men are faced with a number of social situations in day to day life, adverse social situations cause more stress among them. It has also been observed that men are more cautious about prestige and social status. They are always very careful to it and this imagined threat to status and prestige causes more stress among them.
The overall result pertaining to stress and cardiovascular problem reveals that cardiovascular problem is directly related to stress because male and female both type of patients have shown stress among them. A large number of studies have been conducted by psychologists and medical personnel and results obtained in these studies have shown a direct link between stress and cardiac problem. Results of a number of studies are in consonance with the findings of the present study. Simonton, Simonton, and Creighton (1978) and Goodkin, Antoni, and Blaney (1986) all proposed a strong relationship between stress and cancer. Matthews and Glass (1981) suggested a similar relationship between stress and heart disease.

Scientific research on the relationships between stress, psychosocial factors and cardiovascular disease has been ongoing for several decades. Physicians, psychologists and psychiatrists and heart patients themselves all agree that stress plays a significant role in the incidence and course of heart disease. Determining
the precise nature of that role, however, is complex as it depends on the interaction of numerous factors, both personal and societal.

Although there is some overlap between factors studied, research is divided into the broad categories of working life, the influence of gender, private life including marital situation and social support networks, results of traumatic experiences, and the role of personality and behaviour patterns. In each instance both the evidence for the effects of stress on heart disease risk and the possibilities for reducing the risk are discussed. Then we look at research on the biological mechanisms at play. Studies of the relationship between stress and subsequent CHD have produced a mixture of positive and negative findings. In a 12 year followup study of 6935 healthy men, Rosengren et al (1991) found that those who had initially reported substantial stress were more likely to experience coronary artery disease subsequently.
Most of the older literature on stress-related factors and coronary heart disease was dominated by studies of men. Extensive research links chronic stress to coronary heart disease. Hostility, depression and cardiovascular reactivity to stress are heavily implicated in the development of coronary heart disease. Acute stress, negative emotions and sudden bursts of activity can precipitate sudden clinical events, such as heart attack, that leads to diagnosed disease activity to stress or coping with it via hostility may interact with other risk factors, such as elevated cholesterol level, in enhancing overall risk. The pioneering work of Rosenman and Friedman noted a specific pattern. A very large international case control study (11,000 patients and 13,000 control subjects) highlighted the connection between stress and heart disease (Rosengren et al., 2004) from the point of view of patients with a recent first myocardial infarction. The conclusion from this study is that for men self-reported stress defined in this way and assessed after a heart attack has great importance – as much as the most
important accepted risk factors. Its significance is as great as that of cigarette smoking.

Extensive research links chronic stress to coronary heart disease (Vitaliano P, Scanlan J, Krenz C. 2002) Hostility, depression and cardiovascular reactivity to stress are heavily implicated in the development of coronary heart disease. Krantz DS, Mc Ceney MK. 2002, Wulsin LR, Singal BM. Acute stress, negative emotions and sudden bursts of activity Brody JE. 1993 can precipitate sudden clinical events, such as heart attack, that leads to diagnosed disease reactivity to stress or coping with it via hostility may interact with other risk factors, such as elevated cholesterol level, in enhancing overall risk (Lombardo T, Carreno L. 1987). Rifai N, Ridker PM. 2002

Psychological stress has been implicated in the etiology of CHD, both with laboratory/experimental stressors as well as in real life/everyday stress situations. Exaggerated cardiovascular reactions to acute stress have been implicated in both the development and expression of cardiovascular disease (Schwartz et al., 2003; Lepore, Miles & Levy, 1997). Mental stress has
been found to predict future blood pressure and hypertension in a study that recorded blood pressure at initial screening and during a mental stress task (Carroll et al., 2001). Examination of blood pressure status ten years later showed that both systolic blood pressure (SBP) and diastolic blood pressure (DBP) reactions to stress were predictive of hypertension at follow-up. This suggests that heightened blood pressure reactions to mental stress may contribute to the development of hypertension. There is also emerging evidence that acute stress reactivity as examined in laboratory settings may not be independent of stressful life experiences (Carroll, Philips, Ring, Der, & Hunt, 2005). Individuals exposed to high impact life events may be less likely to engage with the minor challenges of acute stress tasks, or the mere exposure to stressful life events may desensitize the hemodynamic system of an individual, thus resulting in diminished reactivity.

**Type A Behaviour and Cardiovascular Disease:**

Results obtained with this variables revealed that though no significance difference has been found between male
and female patients, but a trend of high score on this variable proves that Type A behavior is significantly related with the heart problem. Earlier researches conducted with this issue have also shown similar results.

Many researchers over years have worked on a vulnerable personality trait for emergence of coronary disease and varied reports have been found. Firstly, that behavioural factor plays a large part in risk of coronary heart disease. Some of those factors are voluntary behaviours, like the way people respond to stress and aspects of their personality that may be related to the way they respond to stress. Among those factors is the Type A behaviour pattern. This pattern has been shown to be a risk factor for coronary heart disease. Among the psychological variables life events Type A behaviour pattern aggression and hostility have acquired relevance as risk factors for coronary heart disease. Several studies have attempted to highlight the role of specific factors such as hostility, frustration and aggression, extroversion, introversion, neuroticism and stressful life
events14 in the development of coronary heart disease. Various studies done by Srivastava et al, Basu and Saha Barefoot et al Friedman et al Rosenman et al have highlighted the role of Type A behavior pattern in the development of coronary heart disease. Coronary heart disease has thus been found to be closely linked with life stresses and personality has been found to be associated with coronary heart disease, but all Type A patients do not suffer from coronary heart disease. So, there is a need to find out other factors that might be affecting it. One of these factors can be a person’s response to stressful situations i.e one’s coping styles. Current research, especially in the field of health psychology has mainly focused on the investigations of stable traits rather than on studying coping as a process for simplicity reasons Monat and Lazarus. There are researchers who argue that coping behaviour and personality are strictly related to one another, through a strong structural and conceptual link. Mc Crae and Costa believed that preferred coping strategies depend on certain personality traits. According to Costa and Mc Crae while coping is not necessary a direct expression of
personality, it is certainly influenced by personality traits. Other researchers have suggested that coping behavior itself may be viewed as a trait. Despite such extremely controversial positions, it has to be recognized that both stability and change are present within the coping process. There are inconsistencies in the research findings relating Type A behaviour pattern in the incidence of coronary heart disease. So the need arises to see/ assess whether there are certain specific personality pattern of coronary heart disease patients and the coping strategies they use to deal with these stressful situations. So, this study was planned with the aim of finding out personality profile of coronary heart disease patients and the coping skills used by them as compared to healthy controls.

**Cardiovascular Disease and Coping Strategies:**

In the present study in order to see the coping skills among male and female cardiovascular patients, it was found that male and female patients differ significantly on the coping skills- active coping, seeking social support for emotional reasons, seeking support for instrumental
reasons, focus on venting emotions, denial, religion and alcohol or drug use. It reveals that CVD patients are unable to cope with the life effectively and are easily annoyed by the things and people and in general remain unsatisfied worried emotionally unstable and upset. They are emotionally sensitive, daydreamers, artistically fastidious and fanciful. They are sometimes demanding of attention, help, impatient, dependent, temperamental and not very realistic. It has been found that maximum number of cardiovascular patients has scored less on the problem focused coping- suppression of competing activities and scored higher on seeking social support for instrumental reasons which reflects that these patients suppress their attention to other activities in which they might engage, in order to concentrate more completely on dealing with the current problem. It is to be noted that use of social support for instrumental reasons, as a type of problem focused coping is functional in nature and hence a positive approach. Findings of the present study correlates with the previous findings by Vitaliano et al (1985) in which cardiac patients have used problem
focused coping and Emotional-focused coping to deal with their stressful situations.

Scoring high on two dysfunctional coping strategies by the cardiac patients reflects that they have a tendency to withdraw from the particular situation, which is stressful for them. These patients are consuming alcohol and drugs, so that they can think less about the particular problems they are facing. This finding is supported by the findings of Doering and Dracup et al, Kohlmann et al who also reported that CHD patients use avoidant coping strategies when they have high anxieties, anger and depression. So, it can be concluded that maximum number of patients use social support, alcohol disengagement to cope with their problems. So, there is immediate need to plan preventive strategies by creating public awareness about these and training at risk people to use healthy coping skills and also to provide psychological help to those suffering from CHD for better prognosis.

Male and female patients have differed significantly on venting emotions, denial and alcohol use. The female patients have adopted the skill of venting of emotions
which is commonly found. Emotional expressions are very common in the females as compared to males. They also engage themselves in religious activities to cope with the stressful situations. The male patients have adopted alcohol intake as a coping strategy. The findings of the present study are in consonance with the findings obtained in other studies.

Limitations of Study:

1. Present study has been conducted only on male and female cardiovascular patients. Other demographic variables viz. SES, Age, area of residence, income level etc. have not been taken into consideration.

2. In the study emphasis has been given to only stress, coping and type A Behaviour. Other psychological variables which may influence the cardiac problem are out of study.

3. Since present study is a comparative study between male and female patients, no controls have been included in the study.
4. Life style management is a key factor for cardiac patients, there is no concern regarding their life style management.

5. Apart from stress and personality factors other risk factors have not been taken into consideration.

6. Other psychological problems of cardiovascular patients have excluded in the study.

7. Study is based on only differences between male and female patients. No comparison has been Made on high and low income group.

Suggestions for Further Research:

1. A comparison of personality profile of cardiovascular patients and non-patients is required.

2. Study should focus on psychological needs of the cardiovascular patients.

3. Regional variations in cardiovascular risk factors should be studied.
4. There should be prospective studies of cardiovascular mortality in urban and rural regions.

5. Study should focus on quality of life of CVD patients.

6. Study should be done on social support received by the cvd patients.

7. Study should focus on expected support by cardiovascular patients from caregivers.

8. Study may be done on health management of cardiovascular patients.

9. Prevalence studies should be conducted.

10. Relationship of cardiovascular problem with hypertension, diabetes, and obesity should be studied.