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RELATIONSHIP OF HOSTILITY AND CARDIAC SELF EFFICACY OF CARDIOVASCULAR DISEASE PATIENTS

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ABSTRACT:

Cardiovascular diseases are the leading cause of death worldwide. In India the 2.4 million deaths takes place due to cardiovascular diseases so CVD is the faster growing chronic illness. Hostility is a major psychological factor affects on CVD, but cardiac self efficacy is a cardioprotective element which control the CVD. In the present study 100 cardiovascular disease patients between the age of 45 to 60 from Nashik city were selected. The Cook-Medley Hostility Scale (CMHS) and Cardiac self efficacy scale were administered on all the participants included in the study. There is a very low but negative relation between hostility and cardiac self efficacy. There is very slight difference between cardiovascular disease male patient and cardiovascular female patients on hostility. Female CVD patients are more hostile than male patients. There is very slight difference between difference between cardiovascular disease male patient and cardiovascular female patients on cardiac self efficacy. Male CVD patients shows more cardiac self efficacy than female CVD patients.

Key Words: Hostility, Cardiac Self Efficacy, CVD.

INTRODUCTION:

Every year 10 to 12 million deaths are occurred due to diseases of heart and blood vessels worldwide from which 2.4 million deaths takes place in India. CVDs are the fastest growing chronic illnesses. The alarming thing is that CVDs affects the productive peoples between the ages of 25 to 69.

The term cardiovascular disease refers to a pathological condition that is related to the functioning of the heart and blood vessels. Medical practitioners and cardiac researchers identified variety of factors as risk factors of cardiac diseases. The major risk factors are smoking, a diet high in cholesterol and saturated fat, high levels of body fat, high blood levels of cholesterol and low density lipoproteins, hypertension, a sedentary lifestyle, a family history of heart disease, and being overweight (McArdle, Katch, & Katch, 1981). As the unhealthy behavior patterns, psychological factors like stress, depression, anxiety and hostility are the major risk factors of cardiovascular diseases. Hostility and cardiac self efficacy are considered in the present study.

Hostility has been defined as a multidimensional construct that involves emotion, cognition, and behavior. Behavioral aspects of hostility typically involve aggression, which involves intent to harm and might include sarcasm, insult, and opposition. Emotional aspects of hostility might range from annoyance and contempt to anger (Smith, 1992).

The association between hostility and health outcomes has been repeatedly demonstrated in the literature (Smith & Ruiz, 2002; Surwit, 2002). Hostility has been identified as a risk factor for CHD as well as a predictor of myocardial infarction, CAD, peripheral artery disease, and all cause mortality (Barefoot, Dahlstrom & Williams, 1983; Deary, Fowkes, Donnan & Housley, 1994; Miller et al., 1996; Shekelle, Gale, Ostfeld & Paul, 1983; Smith & Ruiz, 2002; Williams et al.,



1980). Various cross sectional studies shows the relationship between hostility and CVD. Cook and Medley Hostility (Ho) Scale identified an independent association between hostility, and coronary atherosclerosis in patients undergoing coronary angiography (Blumenthal, Williams, Kong, Schanberg & Thompson, 1978; Williams et al., 1980). Subsequent cross-sectional research found hostility to be associated with peripheral artery disease, angina, and coronary artery disease, although there have been negative findings as well (Dembroski, MacDougall, Williams, Haney & Blumenthal, 1985; Friedman & Booth-Kewley, 1987; Joesoef, Wetterhall, DeStefano, Stroup & Fronek, 1989; Koskenvuo et al., 1988; Smith, 1992).

In addition to cross sectional research, several large-scale prospective studies have identified hostility, as measured through structured interview, as a risk factor for CHD. In re analyses of the Western Collaborative Group Study, Matthews and colleagues (1977) and Hecker and colleagues (1988) found that interview-rated hostility discriminated between CHD patients and healthy controls. Behavioral ratings of hostility also predicted CHD in a reanalysis of the Multiple Risk Factor Intervention Trial (Dembroski, MacDougall, Costa & Grandits, 1989).

Studies prospectively examining hostility with the Ho scale have found hostility to be predictive of increased risk for myocardial infarction, CHD death, and all-cause mortality (Smith, 1992). The Western Electric Study, a large-scale study involving 1,877 men, found Ho scores to be associated with increased risk of myocardial infarction and CHD death over a 10-year follow-up, and with CHD death, cancer death, and all-cause mortality at 20-year follow-up (Shekelle et al., 1983). Barefoot and colleagues (1983) also found a relationship between high Ho scores and coronary heart disease in a sample of medical students (N=255) at 30-year follow up.

CARDIAC SELF EFFICACY:

Now a day's people's health lies on their own hands. The lifestyle habits and environmental conditions affects on our health and premature deaths. Sedentariness and nutritional habits increases the risk of CVD. Cigarette smoking, alcoholism can increase the risk of CVD, cancer and respiratory disorders. Environmental factors such as pollution, dysfunctional ways of coping with stressors produce wear and tear on the body.

Perceived self efficacy has played a important role in health- promotive behavior. Personal efficacy plays an influential role in human health in two ways. First level, people's belief in their capability to cope with the stressors in their activate biological systems that mediate health and disease. Second level is concerned with the direct control over the modifiable behavioral aspects to health.

Life style habits can enhance or lesion health. Lifestyle habits which lesion the health care health risk behaviors such as smoking, alcohol consumption, poor nutrition involves fast food, food which increase the level of bad cholesterol, lack of physical exercise and ignoring preventive health screening. To modify life style habits which are adversely affect once behavior is depends upon self regulation. Effective self regulations of health are not attaining through an act of will, but require self regulatory skills. People having higher level of self efficacy belief can develop skills, to influence their own motivation and behavior to change their health habits or behaviors to promote health and eliminate those behaviors or habits which impair the health. Developing self regulatory capabilities requires inculcating a resilient sense of efficacy as well as improving skills. There are various models and theories systematically explain the role of self efficacy and health.

OBJECTIVES OF THE STUDY:

- To explore the relationship between Hostility and cardiac self efficacy.

- To find out whether male CVD patients differ from Female CVD patients in hostility and cardiac self efficacy.

RESEARCH HYPOTHESES:

- Hostility and cardiac self efficacy are negatively correlated.
- There is no difference between cardiovascular disease male patient and cardiovascular female patients on hostility.
- There is no difference between cardiovascular disease male patient and cardiovascular female patients on cardiac self efficacy.

MATERIALS & METHODS:

The investigator obtained formal permission from Cardiologist and Medical Officer of 'Six Sigma Multi-specialty Hospital, Nashik', to collect data for this study.

PARTICIPANTS:

In the present study total 100 cardiac patients was selected from which 50 male and 50 female CVD patients having the age of 45 to 60 on the basis of the diagnosis of the expert cardiologists from Nashik city. The patients who have heart attack, heart surgery, and angina pectoris were selected for the study.

INSTRUMENT:

▪ HOSTILITY:

The Cook-Medley Hostility Scale (CMHS) was then administered to measure hostility. The test was developed by Cook W.W. and Madley D.M. in 1954. This scale consist of 50 items was derived from Minnesota Multiphasic Personality Inventory This scale consists of a 50 question, true - false inventory assessing hostility which has been used as a valid predictor of medical, psychological, and interpersonal outcomes (Contrada & Jussim, 1992). Hostility was measured using the sum of three subscales of the Cook-Medley Hostility Inventory, a subscale of the Minnesota Multiphasic Personality Inventory, with high scores indicating bitterness, mistrust, and cynicism (Cook & Medley, 1954). The three subscales, cynicism, aggression, and hostile affect, were derived through factor analysis (Barefoot, Dodge, Peterson, Dahlstrom, & Williams, 1989). The sum of the three subscales (χ^2 of 9.45, $p = 0.002$), was a better predictor CAD incidence than the full hostility scale. There are 13 items that assess Cynicism (range: 0-13), 9 items measuring Aggression (range: 0-9), and 5 items that assess Hostile Affect (range: 0-5).

▪ CARDIAC SELF EFFICACY:

The test was developed by Sullivan M.D. Andrea Z, Russo J, Katon W.J. (1998). The CSE was developed to evaluate the relationship between the physical symptoms and disabilities in cardiac patients after controlling for the effects of demographic factors, disease severity, depression, and anxiety. The CSE is a 13 item scale consisting of two subscales: Control Symptoms subscale (eight items) and Maintain Function subscale (five items).

RESULT & DISCUSSION:

The purpose of the present study is to explore the relationship between hostility and cardiac self efficacy of cardiovascular diseases. The responses of the participants were analyzed to verify the hypotheses stated earlier. The data is analyzed by using the statistical software SPSS.

Table No. 1: Discriptive Statistics Of Hostility And Cardiac Self Efficacy Of Cvd Patients:

Gender	Variable	Mean	Std. Deviation	N
Male	Hostility	11.10	1.26	50
	CSE	33.56	3.70	50
Female	Hostility	12.02	1.62	50
	CSE	32.60	2.92	50
Total	Hostility	11.56	1.51	100
	CSE	33.08	3.35	100

Table no. 1 shows that female CVD patients have more hostility with a mean of 12.02 (SD=1.26) than male CVD patients (mean 11.10, SD= 1.26). The total hostility of male and female CVD patients have 11.56 (SD=1.51).

The table also shows cardiac self efficacy score of both male and female CVD patients we observe that male CVD patients have more cardiac self efficacy (mean = 33.56, SD = 3.70) than female CVD patients with the mean score 32.60 (SD = 2.92). The total cardiac self efficacy score of male and female CVD patients have 33.08 (SD = 3.35).

Table NO. 2: CORRELATION BETWEEN HOSTILITY & CARDIAC SELF EFFICACY

Gender	Correlation	Interpretation
Male	-.036	Slight, Almost Negligible
Female	-.102	Slight, Almost Negligible
Total	-.130	Slight, Almost Negligible

Table 2 shows that the relationship between hostility and cardiac self efficacy in CVD patients. If we look at the association values of female CVD patient's hostility and cardiac self efficacy ($r = -.102$) shows very low and negative correlation. When we look at the total score of male and female CVD patients hostility and cardiac self efficacy is negatively associated ($r = -.130$). A micro level analysis of the result indicated that if the patient is hostile attribute then his/her cardiac self efficacy level is low or the vice versa if the patient shows low level of hostile attribute his cardiac self efficacy level is high.

Smith & Raiz, 2002, examined the relation between type A personality and cardiovascular diseases, he found that hostility is a toxic component of CVD behavior pattern. The person who is angry and hostile has more conflicting interpersonal relations. Because of the conflicting interpersonal relations they are always in a social conflict and faces low level of social support which is associated and linked with CVD. The hostile person possess unhealthy behaviors such as alcohol consumption, greater caloric intake, tobacco use, physically inactive, less self care, caffeine use, greater body mass index (Siegler, Peterson, Barefoot & Williams, 1992; Smith, 1992). The high level of cardiac self efficacy patients shows healthy behaviors like regular exercise, healthy food habits, control BMI etc. control on diabetics, which controls further complications of the diseases.

The female patients are low level of cardiac self efficacy. Females are not give much attention towards their food habits, lacks exercises but when the researcher interviewed the females they are sometimes take social support from their family member, while male CVD patients take social support from their colleagues. Male patients are not able to show their emotions which may affect on the CVD.



CONCLUSION:

As per the results obtained the following conclusions are summarized as follows.

1. There is a very low but negative relation between hostility and cardiac self efficacy.
2. There is very slight difference between cardiovascular disease male patient and cardiovascular female patients on hostility. Female CVD patients are more hostile than male patients.
3. There is very slight difference between difference between cardiovascular disease male patient and cardiovascular female patients on cardiac self efficacy. Male CVD patients shows more cardiac self efficacy than female CVD patients.

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