CHAPTER-IV

DESIGN AND METHODOLOGY

Overview of the study:

Since ancient times, people have believed that health and illness are associated with each other. These concepts are not new and naive. Health is ubiquitous part of life, serving important social, psychological and behavioral functions across the life span. In other words determine the quality and quantity of the life in recent years diseases are the major source of death and disability all over the world, despite the progress of life and medical sciences. Particularly of late, the incidences of CVD have dramatically increased that has led hot discussion among the researcher. It has been thought that psycho-social factors play a vital role in the etiology of CVD. Much of the evidence supporting this assertion comes from studies relating to self reported psycho-social measures, however, this area of inquiry elicits controversy. Disagreement stems partly from inconsistencies in the literature, hence in the present endeavor attempt has been made to see associations, if any, with Negative Affectivity, Perceived Stress, Learned Helplessness, Competitiveness Achievement Orientation and Social Support. For the purpose following certain criterion four groups of subjects were selected and applied the aforesaid measures

Sample and Design:

A total of 300 male subjects participated in present study to fulfill the requirement. Participation of the subject in the present study was voluntary and informed consents was obtained from all the subjects. The sample has the following characteristics. Majority of the subjects were married and were from middle class. Their educational qualifications ranged from primary to doctorate (Ph D). Forty two percent participants were from rural background and the remaining belonged to urban background.
Design:
Multi-group design

CVD Groups Non CVD Group

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<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
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<tr>
<td>Patients Of Myocardial Infarction (MI)</td>
<td>Patients Of Angina Pectoris (Ang)</td>
<td>Patients Of Essential Hypertension (HT)</td>
<td>Healthy Comparable Participants or (normal population) (NP)</td>
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<td>N=75</td>
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For the purpose of the present study the following groups were formulated:

Group 1. This group comprised of seventy five (N=75) male individual who had MI disease, diagnosed by the heart specialists or cardiologists. They were selected on the basis of their record from various nursing homes and civil hospital situated at Bhiwani city. Patients were eligible for the present study if they had experienced a MI, when their condition become stable before their inclusion into the present study. Patients with serious another medical conditions such as renal failure cancer etc. were not included. Their age ranged from 39 to 69 years with a mean age of 53.53 years. They belonged to urban as well as rural residential background.
Group 2. This group involved seventy five (N=75) participants who were diagnosed as angina pectoris patients. They were also selected on the basis of their record available at various nursing homes and civil hospital of Bhiwani city, during their routine cardiology check - up time to time. These subjects were eligible for the present study if they had suffered from angina pectoris, when their condition become stable before enter into the study. Care was taken to exclude those patients who were suffering from other serious chronic disease. Their age ranged from 39 to 69 years with a mean age of 52.36 years. They belonged to urban as well as rural residential background.

Group 3. The respondents were seventy five (N=75) males who were suffering from essential hypertension. They were also selected from various nursing homes and civil hospital enrolled in out patients program. These participants were diagnosed as patients of essential hypertension by the specialists. They were suffering from this complaint from the past few years consistently. They were not suffering from any other chronic disease. Their age ranged from 39 to 69 years with a mean age of 51.01 years. They belonged to urban as well as rural residential background.

Group 4. This group of subjects was labeled as normal population or the health comparable subjects. Who do not have any evidence of CVD. And who were not taking medicine for any heart problem were eligible to be this group. Their number was seventy five (N=75). Their age ranged from 39 to 69 years with a mean age of 58.42 years. This group was taken from the same geographical area which was comparable in age, SES, education, occupation etc. with other groups.

Measuring tools:

Most of the measures will be used in the present study are based on instruments used in earlier investigation of stress, distress, health, illness and personality.
1. Negative affectivity:

In order to measure negative affectivity majority of studies have utilized various version of NA measures. Watson and Clark (1984) reviewed studies using a number of apparently diverse personality scales and concluded that these scales measured the same stable and pervasive traits, which they called Negative Affectivity (NA). The consistently high inter-correlations among measures of trait anxiety, neuroticism, self-esteem, ego strength, and maladjustment, to name a few suggest that these measures tap a single construct i.e. NA. They considered 12 existing, highly intercorrelated measures as alternate measures of NA. Among these are measures of anxiety, (e.g. Taylor, 1953), neuroticism,(e.g. Eysenck, 1962; Eysenck and Eysenck, 1968), and several scales from the MMPI(e.g. Edward, 1957; Byrne, 1961). Other researchers and personality theorists have recognized the importance of a pervasive personality traits like NA (e.g. Eysenck and Eysenck, 1968; Costa and McCare, 1980; McCare and Costa, 1987). The influential five – factor model of personality developed by Fiske (1949), and Norman (1963), and supported by recent research (McCare and Costa, 1987) includes NA, usually called neuroticism, as one of the five factors. A negative affectivity scale by (Stokes and Levin, 1990) will be used to tap broadband disposition of negative affectivity, which include several aspects of negative affective states such as feeling nervousness and tension, negative attitudes of towards oneself and low self esteem, negative attitude about others and worlds in general, each of these aspects of negative affectivity can be conceived as bipolar continuum, nervous / calm; satisfied / dissatisfied with oneself, cynical / trusting of others and pessimistic about the future. Using these four aspects of NA as a conceptual base they have developed a measure of the broader construct, although no single existing instruments taps all four aspects which is easy to administer upon subjects. The scale has 21 items. Each item has six alternatives such as, disagree strongly to agree strongly. The scores are obtained by reversing the scores on the eight negative items, e.g., 6=1, 5=2, 4=3, etc. and then summing across all 21items. Items 2, 3, 7, 9, 11, 13, 14 and 16 are the negative stated items. The reliability of the scale was ascertained by the authors. Coefficient alphas, a measure of internal consistency, were .87 and .84 for the 21-item scale for sample 1 and 2, respectively.
Eight−five subjects from Sample 2 completed the 21-item scale six week after their original testing. The test-retest correlation was .88; the mean scores for the 21-item NA Scale for the two development sample were 63.15 and 62.81; standard deviations were 17.12 and 15.96; range were 25-104 and 34-107. In the present study the Hindi version was used, hence the reliability of the Indian population was also established on graduate and post graduate students of college. Test−retest correlation after a gap of testing two weeks were .76 for graduates (a sample of 86 Ss) and .81 for postgraduates (a sample of 30 Ss). Convergent and discriminate validity are investigated by authors by correlating NA scale with measures of constructs hypothesized to be related or unrelated to NA based of prior research. The NA scale correlated significantly with the Taylor Manifest anxiety scale (.64 ), Eysenck, Neuroticism scale (.60) the Rosenberg Self esteem scale (-.74) and the Extraversion scale (.38). NA scale was not found to be related to Remotes Associates Test (.001) and the Shipley Vocabulary Test (-.30). The scale is given in Appendix-B1

2. Perceived Stress:

In various investigations researchers have used a variety of stress measures. The majority of studies examining the occurrence of potentially stressful events used some version of a life events checklist. These measures are based on the assumption that illness is related to the cumulative impact of events requiring substantial behavioral adjustment (Holmes and Rahe, 1967). Typical check-lists assess the occurrence of interpersonal stress (e.g., problems with spouse or children), financial difficulties, occupational events (e.g., job demotion), unemployment, and legal problems. Usually, the stress score is simply the total number of items checked as having occurred in the recent past (e.g., the past year). In some studies, scores were based on the sum of normative (as determined by judges) stress weights assigned to each item. Others summed scores based on individual respondent perceptions of the impact of each event. There is however, little difference between the predictive validities of scores based on simple event counts, normative weights (e.g., Lei and Skinner, 1980), and respondent assigned weight (e.g., Sarason, Johnson, and Siegel,
Other studies measured chronic strains. These are persistent objective conditions that require continual behavioural adjustment and are assumed to repeatedly interfere with adequate performance of ordinary role-related behavior (Pearlin, Lieberman, Menaghan, 1981). Examples of ongoing strains include poverty, marital conflict, parental problems, work overload, and chronic illness. Finally, a number of studies used specialized stress scales to assess levels of perceived occupational stress. The term perceived stress is used in this literature to refer to workers rating on such issues as job satisfaction. Occupational self-esteem, role conflict, and inequity of pay. A global measure of perceived stress scale was developed by Cohen, Kamarck and Mermelsein (1983). It provides a potential tool for examining issues about the role of appraised stress level in the etiology of disease and behavioral disorders. It consists 14 items. Each item has five alternative, e.g., never, almost never, some times, fairly often and very often. Perceived stress scale scores are obtained by reversing the scores on the seven positive items, e.g., 0=4, 1=3, 2=2, etc. and then summing across all 14 items. Items 4,5,6,7,9,10 and 13 are the positively stated items. Adequate reliability and validity for the global measure of Perceived Stress Scale have been reported by Cohen, Kamarck and Mermelsein (1983). The perceived stress scale has correlated in expected directions with a range of self-report and behavioral criteria. The coefficient alpha reliability for the PSS was .84, .85 and .86 in sample 1, 11 and 111. The PSS was significantly correlated with depressive symptomatology in sample one was .76 and with sample two was .65. The scale also significantly correlated with physical symptomatology in sample one (r=.52) and in sample two was (r=.65). Similarly health centre utilization was significantly correlated with PSS scores (.20). In both student samples, increases in social anxiety were associated with increases in perceived stress(r=.37 and r=.48 for both samples). The scale has been shown in the Appendix-B2

3. Learned Helplessness:

A psychological state of helplessness used to be measured viewed by utilizing a range of questionnaire methods such as persistence scale, Learned Resourcefulness Scale, Learned Industriousness Scale, Intellectual Responsibility Scale, Attributional
Style, Teacher’s Helplessness Rating Scale, Perception of Control Scale, Expectancy Scale, and Coping Scale. In order to measure general learned helplessness feelings in the present endeavor 15 items learned helplessness scale by Dhar, Kohli and Dhar (1987) was administered to the sample. Each item was checked as ‘right’, ‘wrong’ or ‘uncertain’; responses were scored as 3, 2, 1, respectively. The reliability of the scale was determined by two methods. (a) The dependability coefficient (test-retest) with 7 to 10 days interval on a sample of 100 subjects (16-47 years), is .77. (b) The split-half reliability coefficient, correlated for full length, on a sample of 100 subjects (16-47 years), is .46. Though significant at .01 level, it is low in comparison to the test-retest coefficient, probably because of an unequal number items in the two halves (number of odd items=8, and number of even items=7). Besides face validity, as all items of the scale are connected with area concerned, the scale has high content validity. It is evident from the assessment and ratings of the judges experts that items of the scale are directly related to the concept of learned helplessness. In order to determine validity from the coefficient reliability (Garret, 1977), the reliability index was calculated. This has indicated high validity on account of being .88. The relationship of individual items with total score of the scale was also determined and reported in the test manual (for details). The scale is given in Appendix-B3.

4. Competitiveness Achievement-Orientation:

Empirical TABP research has relied almost exclusively on global measures. This is exemplified by three major prospective studies of TABP and CHD initiated in the 1960s and 1970s (French-Belgian Collaborative Group, 1982; Haynes, Feinleib and Kannel, 1980; Roseman et al., 1975). The original (JAS-ABP), scale has fifty two items which provide global score for TABP. The scale reflects some mixture of a set of interrelated behaviors viz., impatience, time urgency, competitiveness, achievement striving, aggressiveness, and hostility. Authors of the scale reported the adequate reliability and validity of the measure. The Competitiveness – achievement orientations component was measured with a sub scale of Jenkins Activity Survey developed by Jenkins, Zyzanski and Rosenman (1979). The sub scale used in present
study consisting of 20 items. The sub scale is considered to tap dimension of competitiveness, hard driven and a high need for achievement. This scale is always the sum of 20 item recodes. For an item where no response alternative or more than one alternative has been marked, the item is assigned the weight in the "Blank" column. If six or more items on this scale are given the "Blank" weight, no score should be calculated for the scale. The reliability of the competitiveness-achievement measure, Hindi version was established for the purpose of the present study. A correlation was computed between the scores of the present scale and the Hindi version of FTAS (Haynes, and Feinleib, 1980), a ten-items self-report measure of competitiveness, impatience and a high need for achievement (r=.81). Scale is shown in Appendix-B 4.

5. Social Support Questionnaire:

Measuring social support is not a strength-forward task. There are many different dimension that could be measured and no 'gold standard' measure exists for social support, many instruments are used Cohen and Syme (1985) and Cohen and Wills (1985) proposed a distinction between structural and functional support measures. Structural measures describe the existence of and interconnections between social ties; functional measures assess whether interpersonal relationships serve particular functions (e.g., provide affection). The most common measure is a structural index of social ties that is often termed social integration (SI). A prototypical SI index include marital status, closeness of family and friends, participation in group activities, and church and religious affiliations. Functional measures used in the physical disease literature include network satisfaction and perceived availability of material aid or psychological support. Hindi adaptation (Dogra, 1990) of social support questionnaire (Sarason, Leven, Bashan, and Sarson, 1983) was use to measure the social support. It consisted 27 items. Each item had two parts to be answered by the respondent. Part (A) SSn deal with the perceive availability of number of person for social support i.e. the number of persons to whom on individual could turn to and on
whom he or she could rely on in a given set of circumstances. Part (B) that is SSs deals with the degree of satisfaction from the available support i.e. how much satisfied they were with this available social support. It is 6 point likert type scale. Sarason, Leven, Bashan, and Sarson, (1983) have reported that SSQ has a high reliability when compared with extensive structured interview. The scale has test – retest reliability of (0.90) and (0.83) for both ‘n’ and ‘s’ scales. The Hindi version also has high (0.84) test reliability (Dogra, 1990). For SSn, the respondent can write can write name of maximum of nine persons. Mean score were obtained by added the number of persons were related on 6- point scale i.e. from extremely satisfied to extremely dissatisfied. Score on each item ranged from 1 to 6. These scores on each item were added and then divided by 27 to get the mean scores. Minor changes were done in the wording of five items of questionnaire. These were item numbers 2, 5, 10, 12, and 25. (Dogra, 1990). The questionnaire has been shown in Appendix-B5.

Procedure:

Initially the information regarding the respondents where about had been taken from Nursing Homes and Civil Hospital. Furthermore medical information was obtained about each subject/patient from medical history record as well as laboratory reports. Later respondents who fulfill the requirement of the study were contacted individually at their respective residences. First of all biographical data was taken on a separate sheet designed for the purpose of the study and subjects/patients were informed about the general nature of the study as well as what would be required of them during the study. Then the respondents were asked that they would answer the questions honestly because the success of the present investigation entirely depends upon their true answers. And after that respondents were handed over half of the measures with instructions printed their on at one time (morning) and the other half of the measures were handed over at other time (evening). However the order of administering the measures was randomly changed. In this manner all data were collected on the four groups of respondents. This study was conducted during the period Jan. 2006 to Aug. 2007. At the last the respondents were extended warmth thanks.
Analysis Plan:

The obtained data were treated by descriptive statistics and robust statistical techniques. First of all means and standard deviation were calculated and appropriate graph were prepared. In order to see significant difference between groups, data were analyzed by one way analysis of variance, and t-test was used as a post-hoc analysis. The results of the study are reported being in the next chapter-V.