ABSTRACT

The present investigation was explored to examine “A Study of Happiness, Hope and Health Behaviour among Coronary Artery Disease (CAD) and Cancer Patients.” Cancer is an umbrella term for more than 100 different but related diseases. Cancer occurs when cells become abnormal and keep dividing and forming more cells without any internal control or order. Normally cells divide to produce more when the body needs them to remain healthy. However, if cells keep dividing when new cells are not needed, a mass of extra tissue known as tumour or neoplasm forms, which can be benign or malignant. Benign tumours are not cancerous and usually can be removed and when removed in most cases do not reform. In the case of malignant tumours, cancer cells can invade and damage nearby tissues and organs. They can also break away and form a malignant tumour and enter the blood stream or the lymphatic system forming new tumours or metastasis in other parts of the body.

Coronary Artery Disease (CAD) is a condition in which plaque (plak) builds up inside the coronary arteries. These arteries supply our heart muscle with oxygen-rich blood. WHO (1982) defines the CAD as “an impairment of heart function due to inadequate blood flow to the heart compared to its needs, caused by obstructive changes in the coronary circulation to the heart.” Coronary artery disease is our “modern epidemic” i.e. a disease that affects population and not an unavoidable attribute of ageing. Though, there are many types of CAD but, the main four types that have been taken in the present study are Angina Pectoris, Myocardial Infarction, Congestive Heart Failure and Cardiac Arrhythmia.

Research has found that psychosocial interventions may not only help the patients to reduce the stress but may also prolong survival in patients with CAD and
Cancer. People suffering from such life threatening diseases may often be upset and depressed.

Positive thinking of love, courage, optimism, purpose in life, **Hope** and Happiness not only add years to one’s life but also add life to one’s years. Hope can be passive in the sense of a wish or active as a plan or idea, often against popular belief, with persistent personal action to execute the plan or prove the idea. Positive emotions, *feelings and a positive mental attitude can improve the quality of people’s lives and heal their bodies of illness and stresses* (Wong, 1989). **Happiness** is a state of mind or feeling characterized by contentment, love, satisfaction, pleasure, or joy. Positive feelings of Happiness and Hope are protective in developing serious ailments and are beneficial in treating serious medical illnesses such as Cancer (Irving, Snyder and Crowson, 1998). Hope’s importance to Health Care is linked with an increased quality of life (Farran, 1990) less use of health care resources (Herth, 1995) and better health outcomes (Owen, 1989).

**Health behaviour** is defined as an action taken by a person to maintain, attain or regain good health and to prevent illness. Health behaviour reflects a person’s health beliefs. Some common health behaviours are exercising regularly, eating a balanced diet, and obtaining necessary inoculations. (Mosby’s Medical Dictionary).

**Research Objectives**

The present research is systematically designed in accordance with the following main research objectives:

1. **To examine the main effects of gender (male and female), types of disease (CAD and Cancer) and the interaction between gender and diseases on Happiness.**

2. **To examine the main effects of gender (male and female), stages of cancer (I, II, III, IV) and the interaction between gender and stages of cancer on Happiness.**
3. To examine the main effects of gender (male and female), types of Coronary Artery Disease (CAD), (Angina, Myocardial Infarction, Congestive Heart Failure and Cardiac Arrhythmia) and the interaction between gender and types of CAD on Happiness.

4. To examine mean differences between cancer patients of stage 1 and 2, stage 1 and 3, stage 1 and 4, stage 2 and 3, stage 2 and 4, and stage 3 and 4 on happiness.

5. To examine mean differences between CAD1 and CAD 2, CAD 1 and CAD 3, CAD 1, and CAD 4, CAD 2 and 3, CAD 2 and 4, CAD 3 and CAD 4 on happiness?

6. To examine the main effects of gender (male and female), types of disease (CAD and Cancer) and the interaction between gender and diseases on Hope.

7. To examine the main effects of gender (male and female), types of disease (CAD and Cancer) and the interaction between gender and diseases on Agency thoughts and Pathways factors of Hope Scale.

8. To examine mean differences between cancer patients of stage 1 and 2, stage 1 and 3, stage 1 and 4, stage 2 and 3, stage 2 and 4, and stage 3 and 4 on hope, and agency thought and pathways factors of hope.

9. To examine mean differences between CAD1 and CAD 2, CAD 1 and CAD 3, CAD 1, and CAD 4, CAD 2 and 3, CAD 2 and 4, CAD 3 and CAD 4 on hope, and agency thought and pathways factors of hope.

10. To examine the main effect of gender (male and female), types of disease (CAD and Cancer) and the interaction between gender and diseases on Health behaviour.

11. To examine the main effects of gender (male and female), types of disease (CAD and Cancer) and the interaction between gender and diseases on Health Consciousness and Health Carelessness factors of Health Behaviour.
12. To examine the main effects of gender (male and female), stages of Cancer (I, II, III, IV) and the interaction between gender and stages of cancer on overall scores of Hope.

13. To examine the main effects of gender (male and female), stages of cancer (I, II, III, IV) and the interaction between gender and stages of cancer on *Agency thoughts* and *Pathways* factors of Hope.

14. To examine the main effects of gender (male and female), stages of cancer (I, II, III, IV) and the interaction between gender and stages of cancer on Health Behaviour.

15. To examine the main effects of gender (male and female), stages of cancer (I, II, III, IV) and the interaction between gender and stages of cancer on Health Consciousness and Health Carelessness factors of Health Behaviour.

16. To examine the main effects of gender (male and female) types of Coronary Artery Disease (CAD) (Angina, MyocardialInfarction, Congestive Heart Failure and Cardiac Arrhythmia) and the interaction between gender and types of CAD on overall scores of Hope.

17. To examine the main effects of gender (male and female), types of Coronary Artery Disease (CAD), (Angina, Myocardial Infarction, Congestive Heart Failure and Cardiac Arrhythmia) and the interaction between gender and types of CAD on *Agency thoughts* and *Pathways* factors of Hope.

18. To examine the main effects of gender (male and female), types of Coronary Artery Disease (CAD), (Angina, Myocardial Infarction, Congestive Heart Failure and Cardiac Arrhythmia) and the interaction between gender and types of CAD on Health Behaviour.

19. To examine the main effects of gender (male and female), Types of coronary Artery Disease (CAD), (Angina, Myocardial Infarction, Congestive Heart Failure and
Cardiac Arrhythmia) and the interaction between them, gender and types of CAD on Health Consciousness and Health Carelessness factors of health behaviour.

20. To examine mean differences between cancer patients of stage 1 and 2, stage 1 and 3, stage 1 and 4, stage 2 and 3, stage 2 and 4, and stage 3 and 4 on Health Consciousness and Health Carelessness factors of health behaviour.

21. To examine mean differences between CAD1 and CAD 2, CAD 1 and CAD 3, CAD 1, and CAD 4, CAD 2 and 3, CAD 2 and 4, CAD 3 and CAD 4 on Health Consciousness and Health Carelessness factors of health behaviour.

The present study consisted of 400 patients. Of these, 200 were Coronary Artery Disease (CAD) patients and 200 Cancer patients. Patients were drawn from the Out Door Patients (OPD) of the Chhatrapati Shahuji Maharaj Medical University, Lucknow Cancer Institute, Nishat Hospital Lucknow, (U.P. INDIA) and Jawahar Lal Nehru Medical College and Hospital, Aligarh Muslim University, Aligarh (U.P. INDIA). The sample was divided in terms of the variable of gender, i.e., males and females. The age range of the patients was from 25-70 years. Under the cancer group, there were 100 males and 100 females. The sample was further divided on the basis of different stages of cancer (Stages I, II, III, IV). There were 25 males and 25 females in each group.

The Coronary Artery Disease (CAD) group consisted of 100 males and 100 females. The sample was further split on the basis of the different types of Coronary Artery Disease i.e. Angina Pectoris, Myocardial Infarction, Cardiac Arrhythmia and Congestive Heart Failure. There were 25 males and 25 females in each group.
In the present study, three scales were used namely, Adult Hope Scale, Affectometer-2 and Health Care Behaviour Scale:

**Adult Hope Scale**

The Adult Hope Scale developed by C.R. Snyder et al. (1991) was used to measure the disposition of hope among cancer and coronary artery disease patients. The scale consists of eight hope items plus four fillers. The subjects have to rate their responses on a 4-point Likert scale or 8-point Likert scale on a continuum of definitely false (1) to definitely true (4 or 8). There are two domains, the agency and the pathways. Four (4) items reflect the agency, and four (4) items reflect the pathways, the remaining 4 items are fillers. Hope is calculated by taking the sum of the 4 pathways and 4 agency items. The 4 filler items are not used for scoring. Total possible score is 48. For the total scale Cronbach’s alpha’s ranged from .74 to .84. For the agency subscale, alpha = 0.71 – 0.76, for the pathway subscale, alpha =0.63 – 0.8. The Adult Hope Scale possesses acceptable internal consistency and temporal stability.

**Affectometer-2**

Affectometer-2 was developed by Kamman and Flett (1983). It consists of 40 items – 20 positive and 20 negative, half presented as sentences and half as adjectives. Respondents rate how well the items apply to themselves on a five point Likert scale ranging from ‘not at all’ to ‘all of the time’. Responses to negative items are summed and subtracted from the sum of positive items, reflecting the scale’s underlying theoretical principle that mental health status is determined by the degree to which positive feelings and attributes outweigh negative ones. Test-retest reliability of the scale was found to be 0.80 while a coefficient of alpha of 0.95 is reported with a median item total correlation of 0.57.
Health Care Scale

Health Care behaviour was measured by Health Care scale developed by Adhami and Kureshi (1992). The scale consisted of a list of 30 items, 15 were representative of health consciousness and 15 of health carelessness. Each item has five response categories, ranging from ‘strongly agree’ to ‘strongly disagree’ with intermediate columns as ‘moderately agree’ to ‘strongly disagree’. The listed items were placed in random order to avoid any guessing on the part of the subjects.

Prior to data collection, the investigator explained the purpose of the study to the subjects. Three scales along with the personal data sheet were administered to cancer and coronary artery disease (CAD) patients. The investigator established rapport with the respondents (patients) and assured them that their responses would be kept strictly confidential and would be utilized for the research purpose only. After establishing rapport with the respondents, the data were collected individually according to their convenience.

Data were analyzed by using statistical package for Social Sciences (SPSS) version 16.0. In order to answer research questions, the present investigator had adopted analysis of Variance (two-way ANOVA) in which 2x2 and 2x4 research designs were made to do proper analysis. Scheffe test was also used for examining mean differences between cancer patients of different stages and types of CAD patients.

The main findings of the present study led to the following conclusions:

- Significant F-ratio was found for the types of disease (F=13.380, p<0.01) on happiness.
- Significant F-ratios were found for gender of patients (F=5.141, p<0.05) and degrees of cancer (F=17.927, p<0.01) on happiness.
Scheffe test showed that there were significant differences between stage 1 and stage 4, stage 2 and stage 4, and stage 3 and stage 4 cancer patients on happiness.

Significant differences were not found between CAD 1 and CAD 2, CAD 1 and CAD 3, CAD 1 and CAD 4, and CAD 2 and CAD 3, CAD 2 and CAD 4, CAD 3 and CAD 4 patients on Happiness.

Significant F-ratio were found for gender of patients (F=8.845, p<0.05), effects of types of disease (F=71.356, p<0.01) and their interaction effects (F=15.748, p<0.01) on hope.

Significant F-ratios were found for gender of patients (F=4.238, p<0.05), types of disease (F=57.803, p<0.01) and their interaction effects (F=6.719, p<0.01) on agency thought.

Significant F-ratios were found for gender of patients (F=9.351, p<0.01), types of diseases (F=45.174, p<0.01) and their interaction effects (F=18.081, p<0.01) on pathways.

Significant F-ratio was found for gender of patients on hope (F=34.384, p<0.01).

The main effect of degrees of cancer (F=140.385, P<0.01) and the interaction effect between gender and cancer (F=42.591, P<0.01) were found significant on hope.

Significant F-ratios were found for degrees of cancer (F=76.091, p<0.01) and the interaction effect (F=24.230, p>0.05) on agency thoughts.

Significant F-ratios were found for degrees of cancer (F=63.099, p<0.01) and the interaction effect (F=18.151, p<0.01) on pathways.
Significant F-ratios were found for gender of patients (F=13.394, p<0.01), types of CAD (F=2.570, p<0.05) and their interaction effect (F=2.804, p<0.05) on agency thoughts.

Significant F-ratio was found for gender of patients (F=32.529, p<0.01) on pathways.

Scheffe test showed that significant differences were between stage 1 and stage 3, stage 1 and stage 4, and stage 2 and stage 3, stage 2 and 4, and stage 3 and 4 cancer patients on hope, and agency thought and pathways factors of hope.

Significant interaction effect was found between gender and types of disease (F=23.051, p<0.01) on health behaviour.

Significant F-ratios were found for types of disease (F=18.151, P<0.01) and the interaction effect between gender and disease (F=4.652, P<0.05) on health consciousness.

Significant F-ratio was found for interaction between gender and types of disease (F=25.227, p<0.01) on health carelessness.

Significant F-ratios were found for gender of patients (F=14.500, p<0.01) and degrees of cancer (F=5.022, p<0.01) on health behaviour.

The main effect for degrees of cancer (F=4.334, p<0.01) and the interaction effect (F=3.239, p<0.01) were found to be significant on health consciousness.

Significant F-ratio was found for gender of patients on health carelessness (F=13.312, P<0.01).

Significant F-ratios were found for gender of patients (F=10.056, p<0.01) and types of CAD (F=3.736, p<0.01) on health behaviour.
F-ratio was found significant for types of CAD (F=2.913, p<0.05) on health consciousness.

Significant F-ratio was found for gender of patients (F=12.067, p<0.01) on health carelessness.

Scheffe test showed that significant differences were not found between CAD 1 and CAD 2, CAD 1 and CAD 3, CAD 1 and CAD 4, and CAD 2 and CAD 3, CAD 2 and CAD 4, CAD 3 and CAD 4 patients on health behaviour. *consciousness* and *carelessness* factors of health behaviour.