



## A Study to Assess the Level of Stress and Coping Among the Patients With Coronary Artery Disease in GMCH, Guwahati, Assam

Dhanjita Deka\*

\*Vice-Principal, CPMS School of Nursing, Guwahati, Assam, India



Greentree Group

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## ABSTRACT

Coping is essential to overcome stressful life situations and to lead a physically, emotionally and socially productive life. Stressors are experienced by patients with chronic diseases and to overcome these, coping strategies are essential. The present study was conducted with the objectives to assess the level of stress and coping among the patients with coronary artery disease, to find out the balance of stress and coping and to find out the association between the level of stress and coping among the patients with coronary artery disease (CAD) and selected demographic variables. Descriptive research approach with survey design was adopted for the study. In the present study a total no. of 100 patients admitted in cardiology department of Gauhati Medical College and Hospital, Guwahati, Assam with coronary artery disease between the ages of 30 to 70 years admitted for the first time were selected as sample by non-probability sampling technique. To assess the level of stress and coping, "Brief Stress and Coping Inventory" (Richard H. Rahe, M.D. 1998) was used. The result showed that out of 100 patients 37 (37%) patients had less stress, 43 (43%) patients had moderate stress and 20 (20%) had increased level of stress. While assessing the level of coping among the patients, it is seen that, 40% of the patients had adequate coping, 39% had moderate coping and 21% had inadequate level of coping. While assessing the balance of stress and coping among the patients, it was found that majority 33% had fair balance, 27% had good, 21% had worrisome and 19% had excellent balance between stress and coping. While assessing the association statistical significant association was found between stress and family income and stress and educational level ( $p \leq 0.05$ ). It also showed that there is no statistically significant association between coping with the variables of the patients with CAD.

## KEYWORDS

Coronary Artery Disease, Stress, Coping

## INTRODUCTION

Personal and social resources facilitate the adjustment and adaptation to critical life events. Every individual during the lifetime faces various stressful events and very few can cope with the situation and are able to lead a quality of life. Stress is an internal state, which can be caused by many causative factors. Lazarus and Folkman (1984)<sup>1</sup> defined stress as "a relationship between the person and environment that is appraised by the person as taxing or exceeding his resources and endangering

his well-being". To overcome stress, people use various coping strategies. Coping refers to a complex process that is being used in the sense of "ways of dealing with", "confrontation strategies" or "mechanisms commonly used by individuals to cope with stress."<sup>2</sup> It is a strategy that helps people to reduce stress and solve problems and lead a physically, emotionally and socially active quality of life.<sup>3</sup> At 80th, Folkman *et al.* (1986)<sup>4</sup> defined coping as "the person's cognitive and behavioral efforts to manage the



internal and external demands in the person-environment transaction. It is a set of cognitive and behavioral strategies, which individuals use to cope with stress situations.

Stress is very common in conflictive or major demanding situations, such as a person suddenly become sick and is hospitalized. Cardiovascular disease (CVD) is an important cause of mortality and morbidity in India. Mortality statistics and morbidity surveys indicate substantial regional variations in CVD prevalence and mortality rates. Many people in their mid and late life are confronted with one or more chronic diseases. This means that people must learn to live with a condition over an extended time-course of years without the prospect of recovery. As such, living with a chronic disease imposes many threats and challenges to patients. These consequences of suffering from a chronic disease can be studied by the perspective of stressful situations. That is, a chronic disease may be viewed as a major stressful life event, characterized by a number of recurrent stressful situations that pose serious challenges to adaptation. Chronically ill patients have to cope with these stressful situations and, depending on the results of their coping efforts, they may be able to maintain adequate levels of

physical, social, and emotional functioning.

The present study was designed to assess the level of stress and level of coping of the patients diagnosed with coronary artery disease and are hospitalised for the first time. The investigator selected coronary artery disease, because it has a high prevalence in the general population and is significant in terms of its impact on daily life and the adjustment it demands. It was hypothesized that this disease imposes many stressors and demands for coping upon patients.

## OBJECTIVES

1. To assess the level of stress and coping among the patients with coronary artery disease.
2. To find out the balance of stress and coping among the patients with coronary artery disease.
3. To find out the association between the level of stress and coping among the patients with coronary artery disease and selected demographic variables.
- 4.

## HYPOTHESIS

H01 - There is no significant association between the level of stress and coping among the patients with coronary artery disease and selected demographic variables.



## METHODOLOGY

### **Research approach and design:**

Descriptive research approach with survey design was adopted for the study.

**Setting:** The study was conducted in the cardiology department of Gauhati Medical College and Hospital, Guwahati, Assam after obtaining approval from the Institutional Ethical Committee.

**Study population:** Population is the set of people or entities to which the results of a research are to be generalized. The population considered for the study was all the patients with coronary artery disease between the ages of 30 to 70 years.

**Sample size:** In the present study a total no. of 100 patients with coronary artery disease admitted for the first time were selected as sample by non-probability sampling technique.

### **Description of the tool for data collection**

The instrument/tool for the present study consists of two parts – Part I and Part II and administered at the same time.

**Part- I** is the demographic data sheet that consists of a structured interview schedule comprising of 7 variables (i.e. age, sex, education, occupation, family income, type of family and place of residence).

**Part- II:** To assess the level of stress and coping strategies, in the present study “**Brief Stress and Coping Inventory**” (Richard H. Rahe, M.D. 1998)<sup>5</sup> was used.

This is a standardized tool where for assessing the level of stress, there are five components viz. who you are, recent life changes, physical symptoms, psychological symptoms and behaviour and emotions. For assessing the coping strategies used by the patients, the five components are health habits, social support, responses to stress, current life satisfactions and purpose and connection. Thus in this tool level of stress assessment consists of total 137 items and coping strategies assessment consists of 47 items. Considering the stress and coping score in each component, total stress score and total coping scores are calculated. The total score reflect the level of stress and coping among the patients. The maximum score indicates increased stress and adequate coping. The minimum score indicates less stress and inadequate coping. The scores were categorized as follows. Below 50% -Increased stress and inadequate coping, 51% to 75% -Moderate stress and moderate coping and above 76% -less stress and adequate coping. For assessment of stress and coping balance, the difference between total coping score and total stress score are calculated. In this, -15 to -5 score indicates worrisome, -4 to -1 indicates fair, 0 to +4 is good and +5 to +15 indicates excellent balance in stress and coping.



## RESULTS

### Section 1: Demographic information of the sample:

The demographic information of the sample showed that majority of the patients (56%) belonged to the age group of 51 to 60 years, most of them (79%) were male, majority of the patients (42%) educational level was higher secondary and above. Out of 100 CAD patients most of the patients (42%) monthly family income was between Rs. 10,001 to 20,000. Majority of the patients (58%) belonged to nuclear family and most of them (81%) belonged to rural community.

### Section 2: Level of stress and coping among the patients:

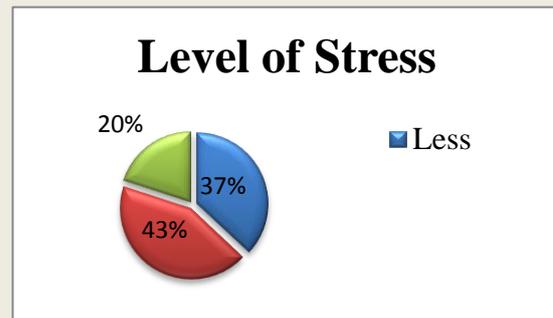
The level of stress and coping score is summarized in Figure 1 and Figure 2 consequently. Overall, out of 100 patients 37 (37%) patients had less stress, 43 (43%) patients had moderate stress and 20 (20%) had increased level of stress. While assessing the level of coping among the patients, it is seen that, 40% of the patients had adequate coping, 39% had moderate coping and 21% had inadequate level of coping.

### Section 3: Balance of stress and coping among the patients:

Balance of stress and coping among the patients with coronary artery disease is depicted in the figure 3. While assessing

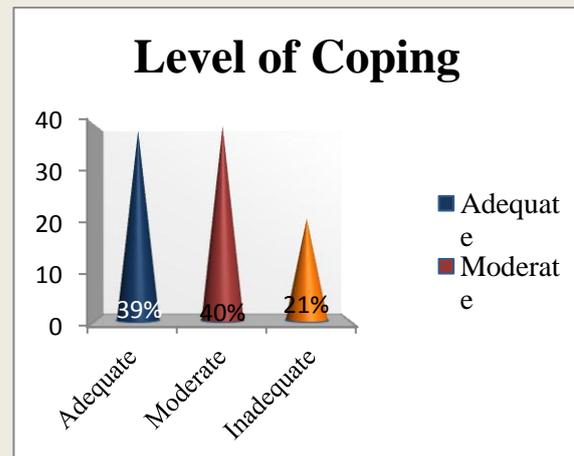
the balance of stress and coping among the patients, it was found that majority 33% had fair balance, 27% had good, 21% had worrisome and 19% had excellent balance between stress and coping.

**Figure 1** Level of stress among the patients



Overall, out of 100 patients 37 (37%) patients had less stress, 43 (43%) patients had moderate stress and 20 (20%) had increased level of stress.

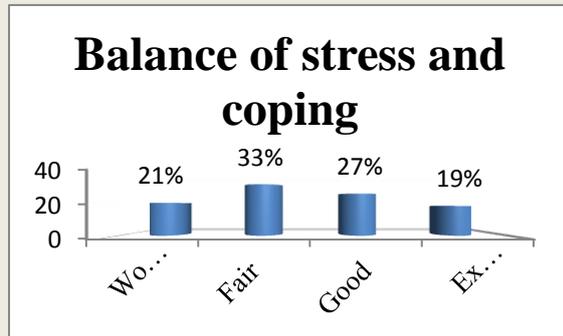
**Figure 2** Level of coping among the patients



While assessing the level of coping among the patients, it is seen that, 40% of the patients had adequate coping, 39% had moderate coping and 21% had inadequate level of coping.



**Figure 3** Balance of stress and coping among the patients



While assessing the balance of stress and coping among the patients, it was found that majority 33% had fair balance, 27% had good, 21% had worrisome and 19% had excellent balance between stress and coping.

#### **Section 4: Association between the level of stress and coping among the patients with coronary artery disease and selected demographic variables:**

While assessing the association between the level of stress and coping among the patients with coronary artery disease and the selected demographic variables, statistical significant association was found between stress and family income and stress and educational level ( $p \leq 0.05$ ). It also shows that there is no statistically significant association between coping with the variables of the patient with CAD.

## **DISCUSSION**

The present study was conducted with the first objective to assess the level of stress

and coping among the patients with coronary artery disease. The final result showed that out of 100 patients 37 (37%) patients had less stress, 43 (43%) patients had moderate stress and 20 (20%) had increased level of stress. While assessing the level of coping among the patients, it is seen that, 40% of the patients had adequate coping, 39% had moderate coping and 21% had inadequate level of coping. The findings of the study were correlated with the study conducted by **Chockalingam A et al. (2003)**<sup>6</sup> as the patients with acute MI report a higher subjective mental stress during 2 to 4 weeks preceding the acute coronary event. The second objective of the study was to find out the balance of stress and coping. In the result it was found that majority 33% had fair balance, 27% had good, 21% had worrisome and 19% had excellent balance between stress and coping. Similar type of correlated study result was found in the study conducted by **Madisetty B., Banda V. R., Hema S., Jaya M. R. (2012)**<sup>7</sup> to assess the stress level and coping strategies among the CAD patients. A total of 100 patients with CAD admitted for the first time were selected by non-probability sampling methods. The result showed that 43% of the patients were having moderate stress and 91% of patients showed moderate coping. None had increased stress and only 5% of the



patients had adequate coping strategy. The third objective of the study was to find out the association between the level of stress and coping among the patients with coronary artery disease (CAD) and selected demographic variables. In the result, statistical significant association was found between stress and family income and stress and educational level ( $p \leq 0.05$ ). It also showed that there is no statistically significant association between coping with the variables of the patients with CAD. The findings of the study were correlated with the study conducted by **Brunett et al. (2004)**<sup>8</sup> which showed that the patients who had moderate income, low social support, prolonged period following a diagnosis of CAD had moderate stress. The study results show the importance of improving the knowledge of patients regarding prevention of CAD, stress management techniques to improve the living condition to lead a quality of life.

## CONCLUSION

The results of the present study revealed that patients have moderate level of stress and majority of the patients use adequate coping strategies. It was also found that majority had fair balance of stress and coping among the patients with CAD and stress is statistically associated with family income and educational level of the

patients. Hence, community and hospital health education is very important to give to the patients and public regarding the preventive measures, the treatment protocols and the guidance in the ways of coping the stressful life situations. The patients coping adequately with stressful disease condition can lead a quality of life.



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