EFFECTIVENESS OF NURSING CARE ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY

By

Mr. K. MUTHUKUMARAN

A Dissertation submitted to
THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY,
CHENNAI.

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

MARCH - 2010

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CERTIFICATE

This is to certify that **"EFFECTIVENESS OF NURSING CARE ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY"**, is a bonafide work done by **Mr. K. MUTHUKUMARAN**, Adhiparasakthi College of Nursing, Melmaruvathur, in partial fulfillment for the University rules and regulations towards the award of the degree of Master of science in Nursing**, Branch-I**, **Medical Surgical Nursing**, under my guidance and supervision during the academic year 2008 - 2010.

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Internal Examiner **External Examiner**

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CHAPTER - I

INTRODUCTION

Health is common theme in all cultures, infact all communities have their own concepts of health as a part of their culture. From the ancient man has been interested in trying to be healthy and to have control over disease. But health continues to be a neglector entity despite of its service at personal and international level. Hence understanding of health is the basis of all health care. Many new concepts are bound to be emerged based on new patterns and trends of thought, which have moved the concept of health from an individual concern to world wide social goal and encompassed the whole quality of life.

Today's world is considered as era of money in every aspect it is concerned with financial gain and loss. As a current trend in medical world many new diseases have appeared some of them can be controlled with the help of proper drugs, preventive measures and with effective control measures.

The heart is a hollow muscular organ about the size of a fist. It lies in the centre of the chest. It is protected by the breast bone (sternum) and rib cage. The heart like all other organs, requires energy and oxygen to perform its work. The heart muscles is nourished by a system of arteries which originate from the aorta. The right and left coronary arteries divide into smaller branches so that every portion of the heart is supplied with nutrients.

The left coronary artery beginning portion called the left main. The left coronary arteries divides into the left anterior descending branch which nourishes the front of the heart muscle and the circumflex which carries blood to the back of the heart. The right coronary artery nourishes the right side of the heart and has branches which extend to the back. The coronary arteries carry oxygenated blood to myocardium when a coronary artery is narrow or blocked the area of the heart become ischemic, injured and infarction may result.

Cardiac catheterization is a special dye test to study the coronary arteries. Its shows the severity and exact location of the blockage. The test shows critical narrowing of these arteries or if the symptoms of angina cannot be controlled with medical therapy,

the clients to be recommend coronary artery bypass grafting surgery.

Surgery is obviously a method of treatment and although it may be the only method for some condition, it is used after medical treatment has been found to be insufficient. Coronary artery bypass grafting surgery is a surgical procedure in which blood vessels from another part of the body is grafted on to the occluded coronary artery below the occlusion in such a way blood flow and bypass the blockage. Coronary artery bypass grafting surgery consists of the construction of new conduits between the aorta to myocardium distal to the obstructed coronary artery. The procedure involves one or more grafts using to improve circulation to the heart muscle to relieve the symptoms of angina or to improve the function of the heart. This new passage routes oxygen rich blood around the blockage to the heart muscle.

Coronary artery bypass grafting surgery requires a sternotomy and the use of cardiopulmonary bypass. It involves diverting the client blood from the heart to the heart lung machine and the blood is oxygenated and returned to the client. Coronary artery bypass grafting surgery remains a palliative treatment for

coronary artery disease it improves clients outcomes, quality of life and survival after coronary artery bypass grafting surgery. The internal mammary artery is the most common artery used for bypass grafting surgery and patency rate is 90 percent after 10 years. The saphenous vein patency rates are 66 percent at 10 years. The radial artery patency rates are 84 percent.

BACKGROUND OF THE STUDY

Coronary artery disease is the result of chronic and progressive atherosclerosis of the coronary arteries. Atherogenesis is characterized by endothelia accumulations of fatty and fibrous tissue that produce atheromas, which gradually decrease the cross sectional areas of the affected coronary artery. This is a multifactor process involving the proliferation of smooth muscle cells within the arterial intima.

Plaque accumulation can be accelerated by smoking, high blood pressure, elevated cholesterol and diabetes. Clients are also at higher risk for plaque development greater than 45 years for men and 55 years for women or they have a positive family history for early heart artery disease.

As the atherosclerotic process continues, perfusion is reduce blood flow to myocardium. It becomes inadequate to meet the heart's oxygen demand and it produces myocardial ischemia. Reduced blood flow may cause chest pain (angina), shortness of breath or other symptoms. A complete blockage caused either by accumulated plaques or a ruptured plaque, can cause a heart attack. Increasing the myocardial oxygen supply can be achieved with interventions such as coronary artery bypass grafting surgery.

Repeated surgery may be needed if grafted arteries or veins become blocked. Results of the clients when underwent surgery are usually excellent, with 85 percent of people having significantly reduced symptoms, less risk for future heart attacks and a decreased chance of mortality for within 10 years.

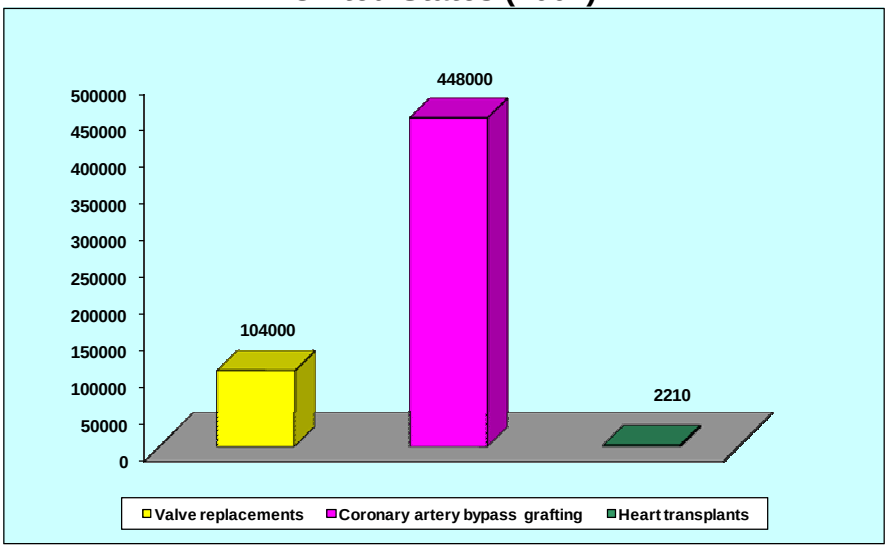
Globally eight percentage world population has access to coronary artery bypass grafting surgery. 6.5 lakhs surgeries are done in a year 2007. Out of 6.5 lakhs in that 4.5 lakhs are performed in United State alone only two lakhs are performed in the rest of world. In the year of 2007 there were 30,000 bypass surgeries done in United Kingdom. An estimated 6.2 million

inpatient cardiovascular operations and procedures are performing in the United States each year,

In India fifty to sixty thousand operations are performed every year where as possibly 2.5 million people may need heart operations in India.

In 2007 United States totally 694,000 open heart procedure performed, in that 104,000 value replacement, 2,210 heart transplant and 4,48,000 coronary artery bypass grafting surgery among that 323,000 were men and 1,25,000 are women. The current success rate of coronary bypass grafting surgery range of 95 to 98 percent. The mortality rate was 0.5 to 2.5 percent.

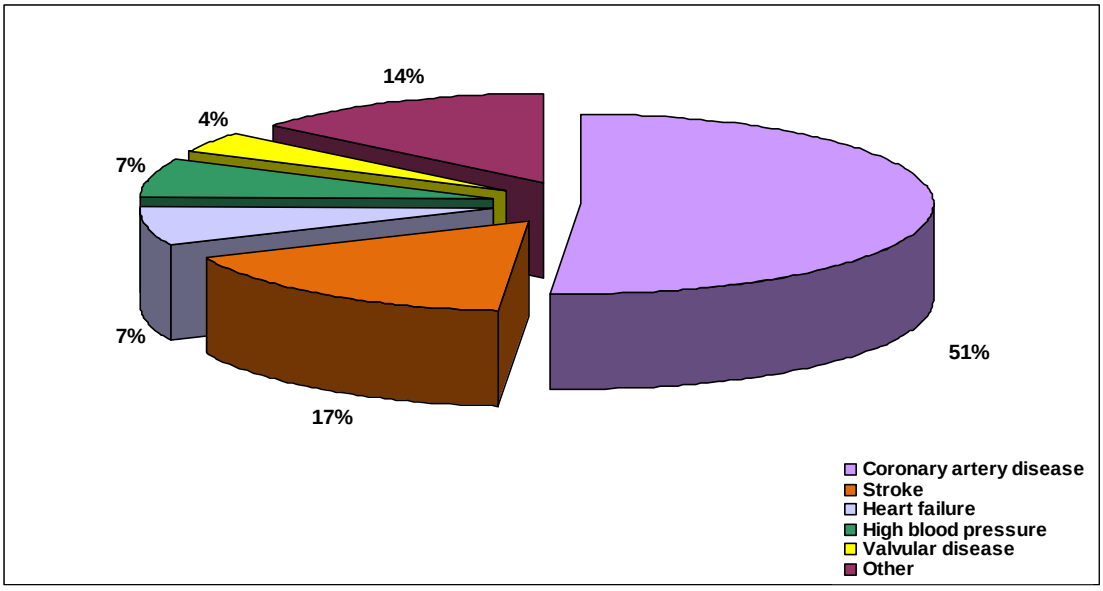
Fig. 1.1 Open heart surgery procedure performed in United States (2007)



Source : American Hear Foundation (2007)

According to **American Heart Association (2007)** cardiovascular disease remains the leading cause of mortality in the United States in men and women of every major ethnic group. It accounts for nearly 1.4 million deaths. Approximately 13 million individuals have a history of coronary artery disease and 7.2 million have suffered a myocardial infarction. Almost 2,500 Americans die of cardiovascular disease each day, an average of one death every 35 seconds.

Fig. 1.2 Mortality rates of cardiovascular diseases

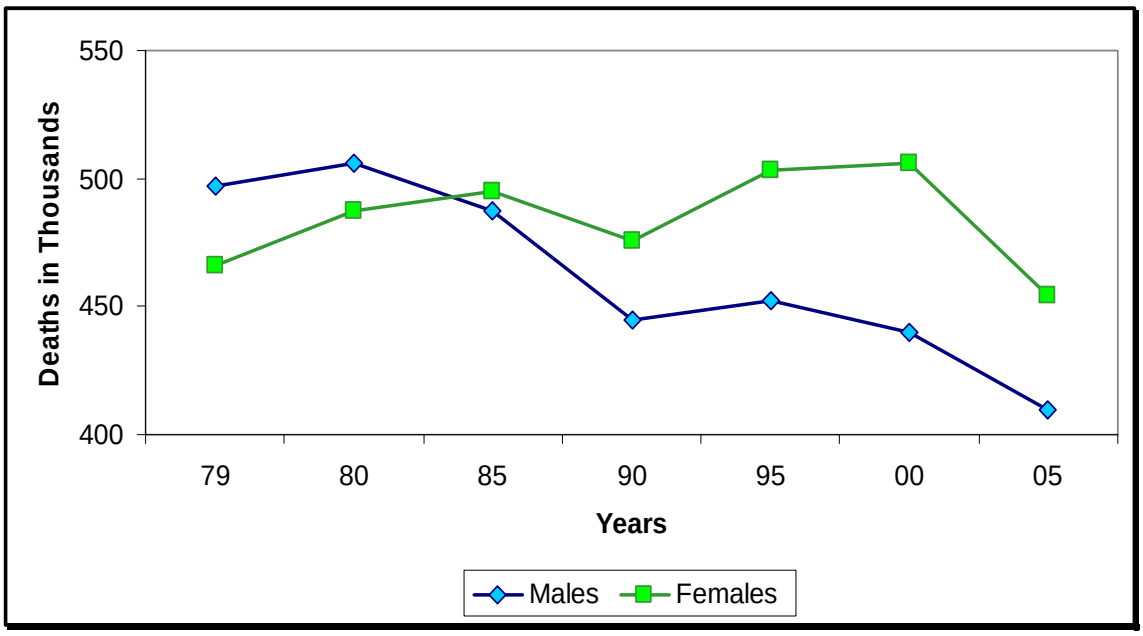


Sources : American heart foundation (2007).

In United State, after the age 65 years, the incidence in men and women equalize although cardiovascular disease causes. More deaths in women than men, additionally coronary artery

bypass grafting surgery is present in African American women at rates higher than white American. In women heart disease kills almost 10 times more than breast cancer. Even though cardio vascular disease remains the leading cause of death in women mortality rate for women with coronary artery disease has women tend to manifest 10 years later in life than men. This to be related to the loss of cardio protective effects of natural estrogen with the loss of menopause. Women will continue to experience disproportionately high mortality from cardiovascular disease by 2040.

Fig. 1.3 Cardiovascular disease mortality trends for males and females (United States: 1979-2005).



Sources : American heart foundation (2007).

NEED FOR THE STUDY

Nursing care is very essential and can change the course of recovery. Nursing care is essential in the pre and post operative period.

Indications for Coronary artery bypass grafting surgery

- Coronary artery bypass grafting surgery is only used to treat people who have severe coronary artery disease.
- Coronary artery bypass grafting surgery also may be a treatment option if clients have blockages in the heart that can't be treated with angioplasty.
- Angina that cannot be controlled by medical therapies
- Left main coronary artery lesions or blockage of more than 60 percentage
- Ventricular dysfunction with blockage in two or more coronary arteries
- Coronary artery lesions are long or difficult to access.

Benefits of Coronary artery bypass grafting surgery

- Improve the quality of life and decrease angina and other symptoms of coronary artery disease
- Resume more active lifestyle

- Improve the pumping action of the heart if it has been damaged by a heart attack
- Lower the chances of a heart attack
- Improve chance of survival

In Global wide 17.1 million people died from cardiovascular disease in 2007, representing 29 percentages of all global deaths. Of these deaths, an estimated 7.2 million were due to coronary artery disease. 82 percentages of cardiovascular disease deaths take place in low and middle income countries. It occurs almost equally in men and women. Every year 3,09,000 people die due to coronary attack in an emergency department or without being hospitalized.

In national wide 45 million clients affected have been with coronary artery disease in India. An increasing number of young Indians are falling to coronary artery disease. The established risk factors of coronary artery disease include lack of exercise, Poor diet, smoking, exposures to chemicals and other environmental substances that also have a profound impact on heart health.

WHO (2009) stated that almost 23.6 million people will die from cardiovascular disease by 2030. The largest number of deaths will occur in the South East Asia Region. In 1990 there were an estimated 1.17 million death results from coronary artery disease in India and it will be doubled to 2.03 million in 2010. It increase 5.9 million in 2030. In India coronary artery disease has more prevalent in the last 40 years. It estimates that be 2020 close to 60 percent of cardio patient world wide will be Indian. Coronary artery disease will overtake infection diseases as common cause of disease in the country. Specific risk factors for Indian are abnormal obesity, uncontrolled diabetes, insulin resistance, high triglyceride, high blood pressure and smoking.

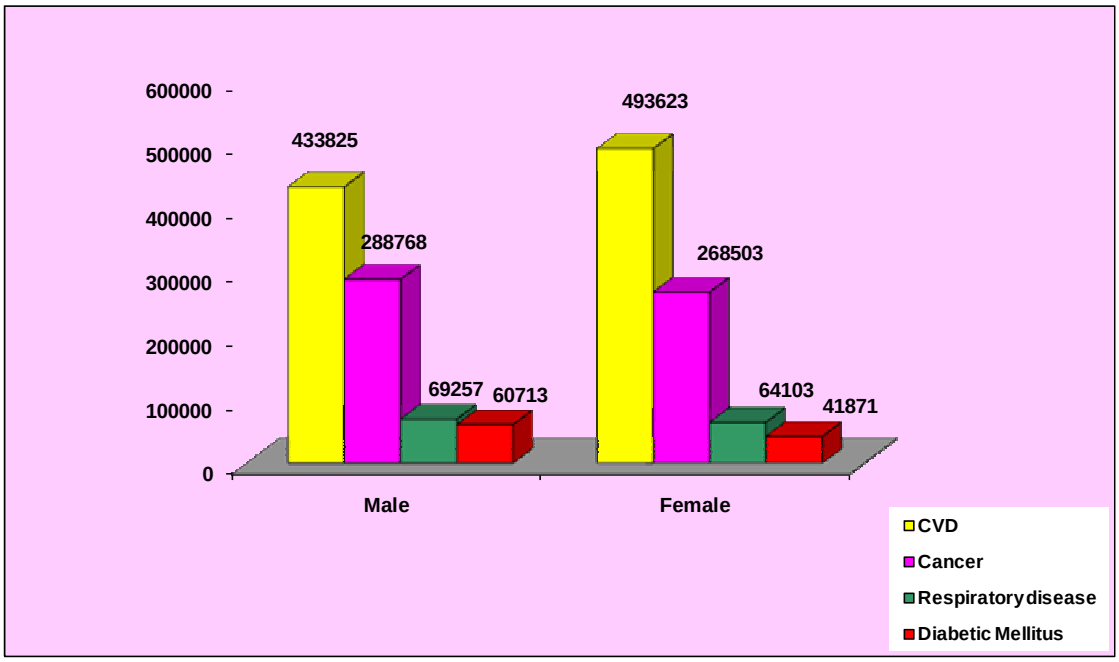
South Indians have higher prevalence, seven percentages in rural and 14 percentage in urban areas, with a total of 29.3 million affected. The vulnerability of urban Indians to coronary artery disease is possibly related to different nutritional, environmental, and life style factors. Migration from rural to urban environment and migration from India to industrialized countries is another special risk factor for the people. Migration is usually associated with stress of seeking and maintaining the new job, stress of coping with the new job expectations.

St. James (2008) reported that risk of coronary artery disease in Indians is three to four times higher than white Americans, six times higher than Chinese and 20 times higher than Japanese. coronary artery disease is affecting Indians five to 10 years earlier than other communities. Indians also show higher incidence of hospitalization, morbidity and mortality than other ethnic groups. The prevalence of coronary artery disease in India is two times higher among urban population than rural.

American Heart Association reveals that the majority of American women do not understand the true threat of cardiovascular disease. Despite the fact that heart disease is the leading cause of death among women, a Nationwide survey revealed that only eight percentage of women perceive heart disease as the greatest threat to their health. More than six out of 10 women falsely believe that they are more likely to develop cancer than heart disease. Over 5,00,000 American women mortality due to cardiovascular disease each year. United State approximately 12,800,000 American suffer from coronary artery disease.

Cardiovascular disease is the major cause of death in the United States. Coronary artery disease in the most common type of cardiovascular disease and accounts for the majority of these deaths. Clients who have coronary artery disease can be asymptomatic or develop chronic stable angina, unstable angina and myocardial infraction are most serious manifestation of coronary artery disease. American Health Association estimates that 1.2 million Americans have coronary artery disease annually and about one fourth of these die in an emergency department or before reaching a hospital. Although the mortality rate from myocardial infraction decreased by 26.3 percentage between 1999 and 2006 due to advance in treatment.

Fig 1.4 Leading cause of death for women and men



Sources : American heart foundation (2007).

Coronary heart disease statistics from 2007 indicates that the total number of adults in the United States living with coronary artery disease at that time was 24.7 million. This represented 11.5 percent of the population. Approximately 4.4 million people were hospitalized because of coronary artery disease, with the average hospital stay lasting four to six days.

WHO stated that, two million Europeans die from coronary artery disease each year. Death rates from coronary artery disease are higher in Northern, Central and Eastern Europe and lower in Southern and Western Europe. The death rate for men aged 35 to 74 living in Russia, An estimated 4,80,000 Germans undergoing cardiac catheter examinations each year and many of these clients are at risk for coronary artery disease. Approximately 2,80,000 Germans also experience a symptom of coronary artery disease. Overall an estimated 21 percentage of European men and 22 percentage of women die from coronary artery disease.

British Heart foundation (2007) indicates that coronary artery disease accounted for more than 2,33,000 deaths in United Kingdom. Every Seven minutes a Canadian dies of heart disease,

coronary artery disease account for more deaths than any other disease.

Coronary heart disease kills more Australians than any other single disease 22,983 deaths in 2006. This was 17 percentage of all death coronary heart disease death rates fell by 45 percentages in males and 44 percentage in female between 1996 to 2006. Older people get coronary heart disease much more commonly, 7.5 percentage of Australians aged 55 to 64 years have coronary heart disease increasing to 20.3 percentage for those aged 75 years.

This global threatening of coronary artery disease in one side surgical measure for coronary artery disease is coronary artery bypass grafting surgery compromising another side. This has to force the great interest of the reseracher to select on clients who have undergone coronary artery bypass grafting surgery had many changes in their physiological and psychological phenomena. For this highly appropriate and suitable approach is effective and efficient nursing intervention. Nurse must prioritize needs carefully with focus on specific intervention for each priorities.

STATEMENT OF THE PROBLEM

EFFECTIVENESS OF NURSING CARE ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY.

OBJECTIVES

- to assess the health status of clients who have undergone coronary artery bypass grafting surgery.
- to evaluate the effectiveness of nursing care on clients who have undergone coronary artery bypass grafting surgery.
- to find the correlation between selected demographic variables and effectiveness of nursing care on clients who have undergone coronary artery bypass grafting surgery.

OPERATIONAL DEFINITION

Effectiveness

It refers to excellence in nursing care and promotes the health status of clients who have undergone coronary artery bypass grafting surgery, which are assessed and evaluated by self structured general health status assessment rating scale.

Nursing Care

Nursing care refers to complete nursing intervention done by the scholar. Nursing care which include both preoperative and post operative management like, provide adequate ventilation, monitor vital parameters, management of pain, maintenance of hydration, positioning, provide comfort measures, wound dressing, dietary management, post operative exercises, early ambulation and health education.

Client

Client refers to those who have undergone coronary artery bypass grafting surgery.

Coronary artery bypass grafting surgery

Coronary artery bypass grafting surgery is one treatment for coronary artery disease. During Coronary artery bypass grafting surgery, a healthy artery or vein from another part of the body will be connected, or grafted, to the blocked coronary artery.

LIMITATION

- The study was limited to six week only
- The samples were selected in Life Line Hospital at Chennai.

PROJECTED OUTCOME

Nursing intervention for clients who have undergone coronary artery bypass grafting surgery would promote comfort, prevents complications and improve the quality of life.

ASSUMPTION

- Helps to improve the knowledge of the people, have got a strong influence on the adaptation of health behaviour and promote quality of life.
- Helps to prevent the complications of coronary artery bypass grafting surgery.
- Helps for speedy recovery after coronary artery bypass grafting surgery.
- Helps to improve the coping ability of coronary artery bypass grafting surgery.

CONCEPTUAL FRAMEWORK

Roy's adaptation model serves as the conceptual framework for this study. Sister Callister Roy's adaptation theory views the client as an adaptative system. Each person is affected by stressors called stimuli. Adaptation level of each person is determined by combined effect of these three classes of stimuli

(1) Focal stimuli immediately confronting the person. In this study it has represented as chest pain, palpitation, fatigue, stress.

(2) Contextual stimuli present in a person or environment. In this study it implies such as age, gender, education, occupation, area of residence, life style modification, economic status, alcohol, smoking, hypertension, diabetes mellitus, nutritional pattern

(3) Residual stimuli such as beliefs, attitudes or traits have an indetermined effects on the present situation. It implies in this study such as hereditary, belief system

Roy identified four modes or ways in a person adapt his internal or external environment stimuli. Physiologic mode, self concept mode, interdependence mode and role mode are the

modes, which determine whether the adaptation is an effective or ineffective response to the stimuli.

In this study, clients who have undergone coronary artery bypass grafting surgery are exposed to external stressors. Admission of the clients. in the Intensive care unit serves as focal stimuli. The investigator believed that the self and environmental stimuli affect the four adaptive modes of the clients who have undergone coronary artery bypass grafting surgery.

Modes

Physiological Mode : Dyspnea, chest pain, fluid & electrolyte imbalance, fatigue, palpitation, oliguria, acidosis, hypotension, edema, dehydration, nausea, vomiting and weight gain.

Psychological Mode : Anxiety, helplessness, lack of self confidence, depression, disorientation and body image disturbance

Role Function : Impaired role performance, anticipated changes in life style

Interdependence : Inadequate social interaction, loneliness, loss of income, loss of job, hospitalization.

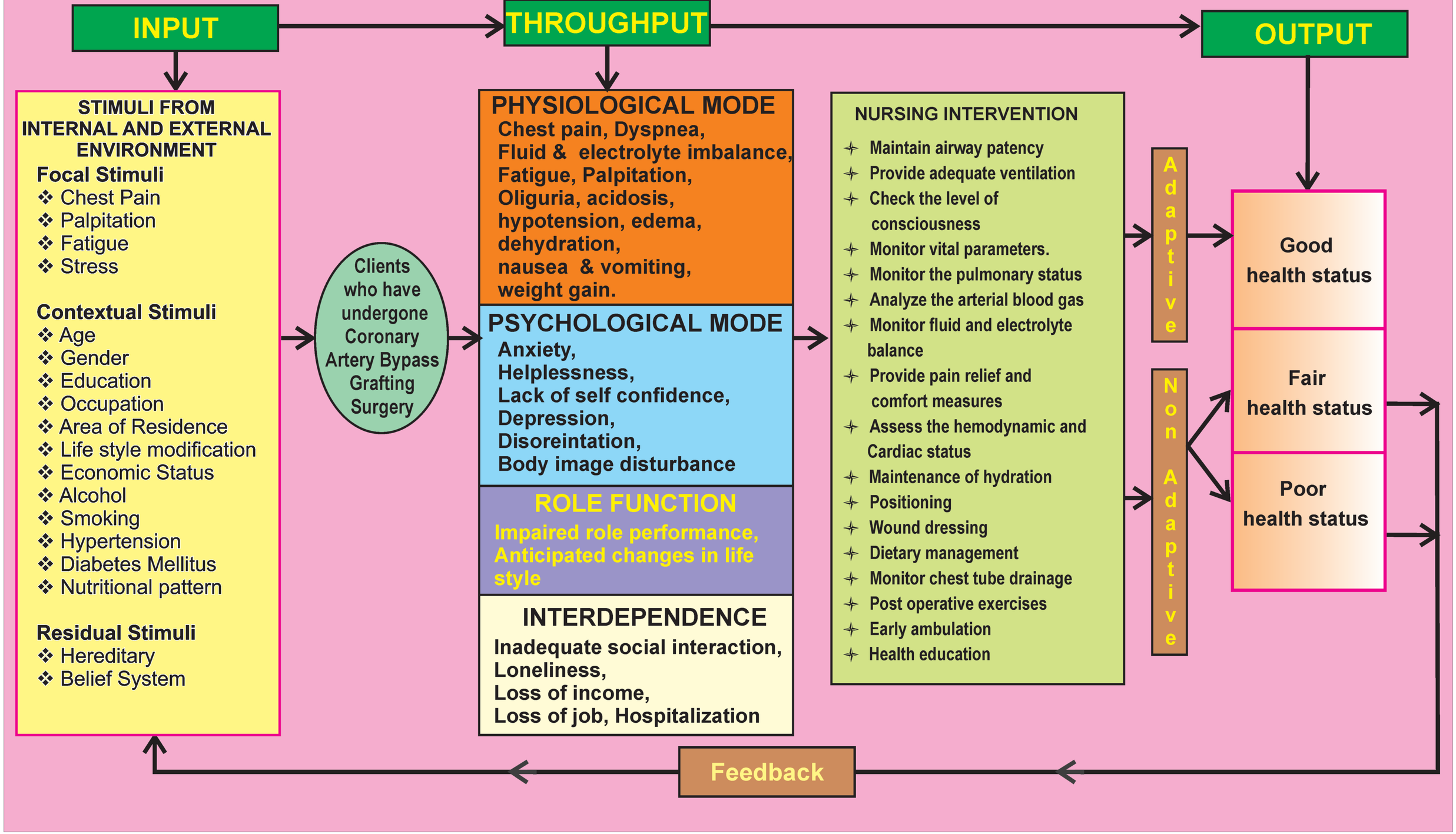


FIG- 1.5 : CONCEPTUAL FRAMEWORK BASED ON MODIFIED ROY'S ADAPTATION MODEL (1984)

CHAPTER – II

REVIEW OF LITERATURE

Every time we read about existing knowledge on a subject. The seed is sown for future research therefore, review of existing literature is a pre request for research. It inspirer us with the desires to know more.

Good research generally builds on existing knowledge. The accumulation of scientific knowledge with out supportive literature should be very much analogous to a back of paper with very little applicability unless it is thoroughly reviewed and developed to form a theoretical frame work for further studies.

The review of literature are presented under the following areas

PART – I : Literature related to indication for coronary artery bypass grafting surgery.

PART –II : Literature related to complication of coronary artery bypass grafting surgery.

PART –III : Literature related to management of coronary artery bypass grafting surgery.

PART –IV : Literature related to nursing care of coronary artery bypass grafting surgery.

PART –V : Literature related to nutrition management of coronary artery bypass grafting surgery.

PART –VI : Literature related to life style modification of coronary artery bypass grafting surgery.

REVIEW OF LITERATURE RELATED TO INDICATION OF CORONARY ARTERY BYPASS GRAFTING SURGERY

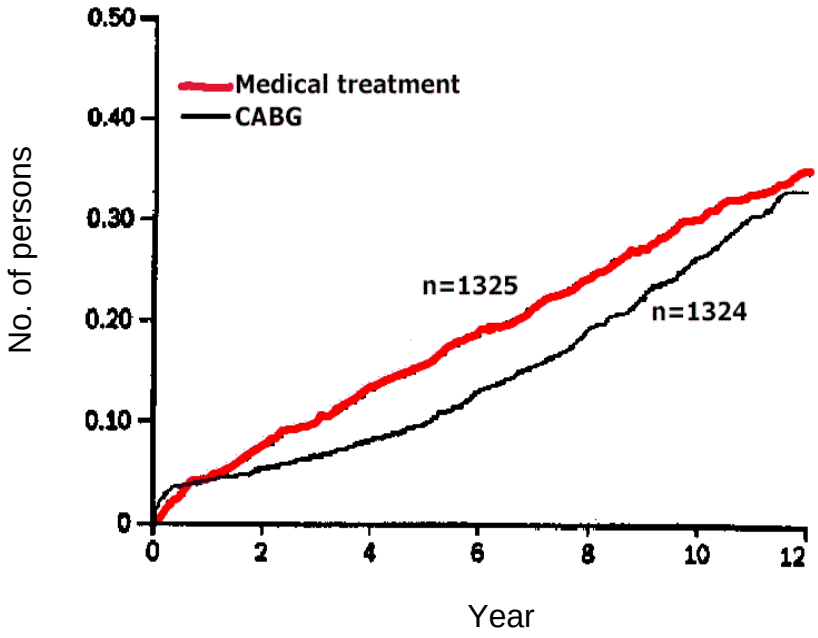
Sabin G, **Tebbe U. (2008),** indicated that coronary bypass grafting surgery is performed on clients who have significant narrowing or blockage in their coronary arteries. clients who have blockages in left main artery or severe blocks in all three branches of coronary artery get the best survival advantage after coronary artery bypass grafting surgery. The surgery is also required for clients who have multiple or diffusely coronary artery disease. Bypass surgery is technically feasible for any type of blockage.

Teirstein PS. **(2008),** reported that balloon angioplasty of the unprotected left main coronary artery were associated with poor early outcomes because of coronary dissection, abrupt closure and restenosis. Mortality rates as high as 30 percentages at first

year were reported. So these kinds of clients are indication for coronary artery bypass grafting surgery.

Barry Frank. (2007), reported that approximately 2650 patients with angina pectoris from coronary heart disease. They were randomized into two equal groups. Half underwent coronary artery bypass grafting surgery and half had no surgery and were treated medically. They were followed for 12 years. Overall results, as graphed below, showed that surgical patients had an increased death rate for the first year, because of surgical complications. Surgery did not decrease death rate until after the second year. At the fifth year 15.5% of non-surgical patients had died compared with 10.2% of bypass patients. In other words, there was only a 5.6% reduction in death rate in surgical versus non-surgical patients at the time of maximum benefit, and a three percentage to five percentage rate of immediate deaths from surgical complications of bypass. Although this shows a statistically significant surgical benefit, it is a narrow margin with which to push bypass surgery on to patients.

Fig. 2.1 Treatment for coronary artery disease



Dabrowski M, **Ryzy W**.**(2007),** viewed that the stenosis of the unprotected left main coronary artery is a classical indication for coronary artery bypass grafting surgery. Occluded right coronary artery severe stenosis of the left main coronary artery, left anterior descending artery, left circumflex artery, and poor left ventricular ejection fraction are the indications for coronary artery bypass grafting surgery. percutaneous coronary interventions for stenosis of unprotected left main coronary artery performed with cardiopulmonary support.

Aupart M, **Neville P**, **(2006),** assessed that during the last three decades, coronary artery bypass grafting surgery emerged,

was developed and has progressed. Additionally recent surgical innovations have been introduced aimed to reducing the trauma without deviating from the efficiency of conventional procedure. New treatment aimed at treating ischemic cardiomyopathy like transmyocardial revascularization, cell transplantation or gene therapy will probably modify indications in the future.

Khattab AA, **Hamm CW**. **(2006),** stated that Involvement of the proximal left anterior descending artery is considered as an indication for coronary artery bypass grafting surgery due to the high restenosis rates associated with this location after percutaneous coronary interventions

Sugita Y, **Shimada K. (2006),** examined that among 462 cases receiving coronary artery bypass grafting surgery during the period from November 2001 to January 2007, emergency operation was performed within 24 hours for 27 cases. Male to female ratio was 21:6, and age of patients ranged from 50 to 83 years (average age 65.9 years). These results suggest that it is important for the improvement of the outcome in emergency coronary artery bypass grafting surgery to prevent aggravation of

circulatory dynamics and to shift to operation under stable conditions.

REVIEW OF LITERATURE RELATED TO COMPLICATION OF CORONARY ARTERY BYPASS GRAFT

Deaton C, **Thourani V**. **(2008),** described that current risk factors for pulmonary complications in coronary artery bypass grafting surgery. Pulmonary complications occurred in 99.4 percent of this surgical patients. Atelectasis, pleural effusion, atelectasis with pleural effusion, and pneumonia were the most frequent pulmonary complications post coronary artery bypass grafting surgery.

Jensen L, Yang L. (2008) stated that type two diabetic patients undergoing coronary artery bypass grafting surgery have worse outcomes than non diabetic patients, especially if insulin treated. Type two diabetic patients had poor health status, 27 percentage had depressive symptoms. 44 percentages had severe complications and 32 percentage were rehospitalized. Insulin treated patients were at higher risk and had worse outcomes. Insulin treatment in type two diabetic patients indicates high risk

and poor outcomes. Intensive management and rehabilitation is needed to improve outcomes,

Hughes (2007), reported that surgery causes physiological stress on the body, carries inherent risk such as shock and hemorrhage. Surgical procedures require specific and specialist nursing care.

Killian M, Russell AC. (2006), reported that diabetes is a disease that can increase the risk of developing cardiac problems, which can include coronary artery bypass graft surgery. These patients are at an increased risk of developing serious complications after this surgery, including deep strernal wound infections. In addition non-diabetic patients may also develop this complication. It is essential to monitor glucose levels after open heart surgery.

Harrington G, **et.al., (2005)** described that patients undergoing coronary artery bypass grafting surgery, the aggregate surgical site infection rate was 7.8 infections per 100 procedures. It differ with individual institutions ranging between 4.5 and 10.7 infections per 100 procedures. Diabetes mellitus patients more

prone to get infection Three hundred thirty four organisms were isolated from 296 Surgical site infection, methicillin resistant Staphylococcus aureus was isolated from 32 percentages, methicillin sensitive S. aureus from 24 percentage, gram negative bacilli (eg, Enterobacter and Escherichia coli) from 18 percentage, and miscellaneous organisms from the remainder

Sharma M, **Berriel-Cass D**. **(2004),** described that surgical site infection, is a serious and costly complication following coronary artery bypass grafting surgery. Most cases were diagnosed on readmission and were identified by post discharge surveillance. Gram positive cocci were most frequently recovered (81%) gram-negative bacilli (17%), gram-positive bacilli (1%) and yeast (1%) were less common. Staphylococcus aureus was the most frequently isolated pathogen surgical site infection complicated 3.5 percentages of the procedures. S. aureus was implicated in most of the cases and was significantly associated with deep surgical site infection.

REVIEW OF LITERATURE RELATED TO MANAGEMENT OF CORONARY ARTERY BYPASS GRAFTING SURGERY

Lopez V, **Sek Ying C (2008)** examined that recovery from coronary artery bypass grafting surgery is a dynamic process and the associated physical, psychological and morbidity social effects could lead to failure to recuperate leading to hospital readmission. Physical recovery dimension was assessed ambulation, sleep, rest, body movement and care. Social recovery dimension was assessed by home management, social interaction, and recreation Psychological recovery was assessed using the centre for epidemiologic studies depression. Patients who had poor physical and social recovery had more depression at one week and three months after coronary artery bypass grafting surgery.

Evans RK. (2007), reported that post operative physical activity participation is considered important for achieving optimal weight loss and maintenance after bypass surgery.

Muir RL. (2007), indicated that better clinical evaluation and routine screening are important in identifying and treating patients at risk for coronary artery bypass grafting surgery. Patients should receive risk factor modification, such as treatment and health

education, about smoking cessation, blood pressure control and lowering of cholesterol. Appropriate pharmacological management includes antiplatelet therapy of aspirin, use of clopidogrel for those individuals who are sensitive to aspirin. Patients who had bypass surgery placement require dual antiplatelet therapy of aspirin and clopidogrel.

Willems TP, **Post WJ**. **(2007),** described that regular physical activity in the preoperative phase of coronary artery bypass grafting surgery influences favorably the patients' prognosis, reducing hospital length of stay and complications. Concomitantly, the surgical experience promotes a lifestyle change increasing the frequency of physical activity.

Martin F. (2006), viewed that depression which is often unrecognized, is one of the major factors to influence the outcome of cardiac rehabilitation programmes. The review highlight that depression is a more important determinant of the successful outcome of a cardiac rehabilitation programme than many of the cardiac function indicators. It also describes the implications for clinical practice and presents a framework for the assessment of depression which can be used by all staff.

Brackbill ML, **Sytsma C**. **(2004),** assessed that secondary prevention of hyperlipidemia in patients after coronary artery bypass grafting surgery prevents progression of atherosclerosis. A multidisciplinary team promotes secondary prevention by prescribing antihyperlipidemic agents, screening for risk factors, and providing education on disease, diet, and medications. Initiation of an antihyperlipidemic agent and provision of education during hospitalization for coronary artery bypass grafting surgery results in a high percentage of patients continuing anti hyperlipidemic therapy and having cholesterol levels monitored by their primary care provider after discharge.

Salmon B. **(2003),** revealed that the purpose of this study was to determine whether a difference exists between genders in compliance to a heart healthy lifestyle and the stress of coronary artery bypass grafting surgery. Men scoring lower risk factor scores than women, indicating lower cardiovascular risk and better compliance to a healthy lifestyle, both before and after surgery indicating an improvement in cardiovascular risk. The risk factors assessed are applicable to both heart disease and peripheral vascular disease.

Moore SM. **(2002),** revealed that the negative emotions increased over the first month of recovery and included depression, anger, and anxiety. Most frequently reported physical sensations associated with fatigue, chest pain, sleeping problem, leg incision, pain on shoulder and neck muscles, and cough. Coronary artery bypass grafting surgery recovery experience provided data for development of discharge information, that focused on concrete experiences from the viewpoint of the person having coronary artery bypass grafting surgery included orienting information about the onset, sequence, duration of the experiences and home management.

Samain E. (2001), stated that coronary artery bypass graft surgery have high risk for the development of venous thromboembolic events. Thromboprophylaxis is recommended after coronary artery bypass grafting surgery with either subcutaneous low molecular weight heparin or intravenous infraction heparin. The anticoagulation recommended to prevent valve thrombosis is sufficient in order to prevent venous thromboembolic events.

Keib CN, **Pelham JC**. **(2000),** indicated that mediastinitis risk by following coronary artery bypass grafting surgery is less than five percentage. However, this devastating complication results in significant mortality and morbidity. Prevention of deep surgical site infections is essential.

REVIEW OF LITERATURE RELATED TO NURSING CARE OF CORONARY ARTERY BYPASS GRAFT SURGERY

Vitello-Cicciu J. (2007), the complication of mediastinitis has important implications for nurses. Patients developed a sternal wound infection following coronary artery bypass grafting surgery. Nursing care is discussed and summarized in care plans for the diagnoses of ineffective breathing pattern, impaired skin integrity and ineffective coping. Expert nursing care resulted in hospital discharge approximately two months after admission.

Rasmussen D. **et., al., (2007)**, indicated that Postoperative symptom evaluation, physical functioning, and physical activity among the female. At six weeks to three months after surgery, there were significant correlations between cardiac surgery related recovery symptoms shortness of breath, fatigue, depression,

incision pain and sleep problems and physical functioning physical, vitality, and body pain. Functioning subscale scores, self management intervention to assist females in recovering from coronary artery bypass grafting surgery to improve symptom management, thereby enhancing physical functioning and physical activity outcomes.

Hamar GB, **Westerfield J**. **(2006),** reported that glycemia awareness initiative resulted in a positive impact on practice patterns. Undiagnosed diabetes and impaired fasting glucose are important unrecognized issues. Advanced practice nurses could improve patient outcomes by ordering glucose testing and glycemic management as a routine practice for all cardiac surgery patients.

Theobald K, **McMurray A. (2006),** reported that half the patients experienced heart surgery as a huge personal shock. Adjusting to life afterwards was difficult and they experienced a variety of changes including pain. An unexpected finding was a heightened sense of body awareness and the need for postoperative physical adjustments and the need to improve discharge preparation and provide enhanced home support

services. Nursing care help the successful recovery of periodic follow up and mechanisms for mutual support.

Cebeci F, **Celik SS. (2005),** revealed that the discharge training and counseling services given to patients had a positive impact on the self care ability of these patients on alleviating the problems they encountered. Provide a booklet according to their individual knowledge. It increase self care ability and reduce post discharge problems in coronary artery bypass grafting surgery patients.

Lord C. (2005), revealed that the need for preventing surgical site infections in patients after bypass is paramount. The incidence, impact, surveillance and prevention of infection, along with guidelines to assist the home health nurse in practice.

REVIEW OF LITERATURE RELATED TO DIETARY MODIFICATION OF CORONARY ARTERY BYPASS GRAFTING SURGERY

Radhakumari. (2006), in her retrospective study on nutritional care among 28 post coronary artery bypass grafting surgery patient found that most patients who had undergone

coronary artery bypass grafting surgery were following diet rich in ghee, butter, veg oils containing unsaturated fatty acids. The study concluded that minimum as nil fatty diet, decrease intake of oily foods, avoidance of non-veg diet, control of obesity and smoking can prevent recurrence of cardiac disease.

Vogel. (2005), a study on reported in his secondary of Coronary artery bypass grafting surgery prevention among 605 French men and women, were randomized to eat prudent diet and another group fish, fruits, vegetables, less meat and grains. The result proved that there was 72 percentages reduction in cardiac events and 60 percentages reduction in five year over all mortality that of prudent diet group.

Eristland, Annesen, Abdelnoor. (2003), conducted a randomized controlled study on 610 patients undergoing Coronary artery bypass grafting surgery to assess the effectives of dietary supplementation with n-3 fatty acids for one year following surgery and found that this supplementation reduced the incidence of view graft occlusion.

Diada, Yokoi, Miyano. (2002), conduced a retrospective study on relation of saphenous view graft obstruction to serum cholesterol among 284 post coronary artery bypass grafting surgery patients and found that lower serum cholesterol levels are associated with lower rates of view graft obstruction for up to seven years. There by cholesterol lowering therapy may improve long-term saphenous view graft survival after Coronary artery bypass grafting surgery.

REVIEW OF LITERATURE RELATED TO EXERCISE MANAGEMENT OF CORONARY ARTERY BYPASS GRAFTING SURGERY

Ranier Hambert. (2008), an experimental study conducted to assess the effects of exercise or blood vessel function among to coronary artery bypass grafting surgery patient who exercise group there had been 50 percentages reduction in blood flow restriction near the heart when compared it control group.

Takeymma, Itoh, kato. (2007), conducted an experimental study on effects of physical training after coronary artery bypass grafting surgery among as patient. In the study the heart rate was

as an index of parasympathetic activity and plasma nor epinephrine for sympathetic activity and it concluded that physical training after surgery improves both exercise capacity and parasympathetic activity.

Philips Evans. (2005), recommends that walking is the best exercise to better heart. A walker loses weight and walking lower cholesterol reduces hypertonic and increases strength, flexibility balance and stamina. It is best to begin with walking one nice a day and according to tolerance gradually increase to two miles.

Aotha. (2003), indicated that the role of nurse in improving and coordination of cardiac rehabilitation programme. The nurse has a vital to role educate the patient to reduce negative effect of bed rest by helping them to start with non strenuous exercise, and also it provide all information needed at discharge.

REVIEW OF LITERATURE RELATED TO LIFE STYLE MODIFICATION OF CORONARY ARTERY BYPASS GRAFTING SURGERY

Dharmalingam. (2004), conducted a descriptive study on infections following cardio thoracic surgery among 30 post

coronary artery bypass grafting surgery clients and found there is an association between age and occurrence of infection following coronary artery bypass grafting surgery there were a higher incidence of infection among age group 56 to 65 years at the down site wound, irrespective of radial or saphenous vein graft involved.

Kalpana Agarwal. (2003), reported that rehabilitation of an individual after coronary artery bypass grafting surgery helps the individuals is restore to optimum status in physical, psychological, social and vocational terms and to prevent progression of underlying disease process.

CHAPTER – III

RESEARCH METHODOLOGY

This chapter deals with the methodology adopted for this study and includes the description of research approach, research design, setting, population, sample size, sampling technique, criteria for sample selection, data collection procedure and instruments.

RESEARCH APPROACH

Quantitative research approach was used.

RESEARCH DESIGN

Evaluative research design method was used to evaluate the effectiveness of pre and post operative nurse care on clients who have undergone coronary artery bypass grafting surgery.

SETTING

Research setting refers to the physical location and condition in which data collection taken place in the study. The research was conducted in Life Line Hospital at Chennai.

POPULATION

The population for this study consists of clients who were admitted for coronary artery bypass grafting surgery in the Life Line Hospital at Chennai, during the time of data collection.

SAMPLE SIZE

The sample consisted of 30 clients, who fulfilled the inclusion criteria for the study.

SAMPLING TECHNIQUE

The investigator adapted a probability simple random sampling technique. This technique was used to select the clients who have undergone coronary artery bypass grafting surgery and data was collected from the intensive care unit in Life Line Hospital at Chennai.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

- Both males and females clients who have undergone coronary artery bypass grafting surgery.
- The clients who were admitted for coronary artery bypass grafting surgery.

- The clients who could speak Tamil or English.
- The clients between the age group of 40 to 70 years.

Exclusion Criteria

- Clients with other systemic infection and disease.
- Clients with more than 70 years

METHOD OF DATA COLLECTION

The data collection was done for the period of six weeks. The investigator obtained oral consent from the clients and their relatives. Data collection was done by using demographic variables and effectiveness was evaluated with the self structured general health status assessment rating scale. Based on the needs nursing care was provided to clients who have undergone coronary artery bypass grafting surgery.

INSTRUMENTS

The scholar constructed the instrument based on the objectives of the study through literature review and experts guidance which considered as follows.

PART – I

Demographic variables

This section consists of information about demographic variables such as age in years, gender, marital status, religion, residential area, educational status, nature of job, family income, Personal habits, history of co – morbid diseases, type of meal pattern and history of previous hospitalization.

PART – II

It includes both preoperative and post operative observational check lists.

Observational check list – A

It consist of observational checklist used to assess the pre operative health status of the client admitted for coronary artery bypass grafting surgery. It includes monitor vital parameters, provide adequate ventilation, assess pain level, provide pain relief and comfort measures, assess the cardiac status, maintenance of intake and output chart, maintenance of nutrition, preoperative medication, preoperative exercise, preoperative physical preparation, consent, check bowel and bladder pattern, preoperative health education.

Observational check list - B

In this section an observational check list was used to monitor the general condition of the clients who have undergone coronary artery bypass grafting surgery. It includes monitor vital parameters assess level of pain, check level of conscious, hydration status, wound healing, urine output, weight gain, wound drainage, skin turgor, range of physical movement, pressure sore, bowel sound and bowel elimination.

PART - III

In this section a self structured general health status assessment rating scale was used to monitor the health status of the clients who have undergone coronary artery bypass grafting surgery.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with description of tool, report of pilot study, validity, reliability, informed consent, data collection procedure, scoring interpretation, method of data analysis plan.

DESCRIPTION OF THE TOOL

In this research study the demographic variables and self structured general health status assessment rating scale was used to evaluate the effectiveness of nursing care among clients who have undergone coronary artery bypass grafting surgery.

DEMOGRAPHIC VARIABLES

PART- I

Demographic variables includes age in years, gender, marital status, religion, residential area, educational status, working pattern, family income, personal habits, history of co–morbid diseases, type of dietary pattern and history of previous hospitalization.

PART – II

It includes both preoperative and post operative observational check lists.

Observational check list – A

It consist of observational checklist used to assess the pre operative health status of the client admitted for coronary artery bypass grafting surgery. It includes monitor vital parameters, provide adequate ventilation, assess pain level, provide pain relief and comfort measures, assess the cardiac status, maintenance of intake and output chart, maintenance of nutrition, preoperative medication, preoperative exercise, preoperative physical preparation, consent, check bowel and bladder pattern, preoperative health education.

Observational check list - B

In this section an observational check list was used to monitor the general condition of the clients who have undergone coronary artery bypass grafting surgery. It includes monitor vital parameters assess the level of pain, check the level of conscious, hydration status, wound healing, urine output, weight gain, wound

drainage, skin turgor, range of Physical movement, pressure sore, bowel sound and bowel elimination.

PART – III : SELF STRUCTURED GENERAL HEALTH STATUS ASSESSMENT RATING SCALE

Self structured general health status assessment rating scale was used to identify the improvement in the health status of the clients who have undergone coronary artery bypass grafting surgery.

REPORT OF THE PILOT STUDY

Research proposal was approved by research committee. Prior permission was obtained from authorities and individual oral consent obtained from the clients and their relatives. Self structured general health status assessment rating scale was used to find out the reliability, validity, feasibility and practicability of tool. The pilot study period was two weeks and five sample were selected based on inclusion criteria, assessment was carried out and comprehensive nursing care was given to clients who have undergone coronary artery bypass grafting surgery and effectiveness was evaluated with the self structured general health status assessment rating scale. During the study five samples

were selected by using probability simple random sampling method. The data was analyzed by using paired ‘t’ test. The Calculated value is greater than tabulated value at 0.001 level of significance. Therefore the nursing care was highly effective on clients who have undergone coronary artery bypass grafting surgery. It promotes their health condition positively.

VALIDITY

The tool was prepared by the investigator based on literature review, under the guidance of experts and on the basis of objectives, which were assessed and evaluated, accepted by experts of research committee. Content validity of this instrument was obtained from nursing and medical experts.

RELIABILITY

The reliability was checked by the interater method. The reliability was 0.82 by using Cronbach’s formula. After that nursing care was provided.

INFORMED CONSENT

The investigator obtained written consent from the recommendation committee, institution. Explained the procedure

to clients and their relatives. Oral consent obtained from clients and their relatives to assess the health condition and to provide nursing care for clients who have undergone coronary artery bypass grafting surgery confidentiality was maintained throughout the study.

DATA COLLECTION PROCEDURE

The main study was conducted in Life Line Hospital at Chennai and who met the inclusion criteria were selected by using probability simple random sampling technique. The investigator first introduced himself to the clients and their relatives to develop a good rapport with them and obtained oral consent from clients and their relatives. The investigator collected the relevant data based on the topic and purpose of the study. The data collection was done based on demographic variable, pre and post operative nursing care was given as per checklists after coronary artery bypass grafting surgery. The health condition of clients was assessed by using self structured general health status assessment rating scale. The data collection period was six weeks. Based on the collected data nursing care was given and effectiveness was found by comparing the pre-assessment and post assessment score.

SCORING INTERPRETATION

$$\text{Scoring interpretation} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

SCORE DESCRIPTION

Percentage	Description
More than 76%	Poor health status
51-75%	Fair health status
Less than 50%	Good health status

METHOD OF DATA ANALYSIS PLAN

The data analysis was done by using descriptive and inferential statistics according to the need, the items were scored after assessment and evaluation and the result were tabulated. The statistical methods were used for analysis mean, standard deviation, paired ‘t’ test and correlation.

S. No	Data analysis	Method	Remarks
1.	Descriptive statistics	Frequency and percentage, mean and standard deviation	To describe the demographic variables of clients who have undergone coronary artery bypass grafting surgery.
2.	Inferential statistics	Paired 't' test	Analyzing the effectiveness between pre assessment and post assessment of health status of the clients who have undergone coronary artery bypass grafting surgery.
		correlation	Analyzing the correlation between the selected demographic variables and effectiveness of post operative care on clients who have undergone coronary artery bypass grafting surgery.

DATA ANALYSIS AND INTERPRETATION

Analysis is the categorization of obtained score to research tool. Researcher analyzed and interpreted under the following Sections

Section A - Distribution of demographic variables on clients who have undergone coronary artery bypass grafting surgery.

Section B Frequency and Percentage distribution of health status of clients who have undergone coronary artery bypass grafting surgery.

Section C - Comparison of Mean and Standard Deviation of pre test assessment and post test assessment score of clients who have undergone coronary artery bypass grafting surgery.

Section D - Mean and standard deviation of improvemental score for clients who have undergone coronary artery bypass grafting surgery.

Section E - Correlation between demographic variables and effectiveness of nursing care of clients who have undergone coronary artery bypass grafting surgery.

SECTION - A

TABLE – 4.1

DISTRIBUTION OF DEMOGRAPHIC VARIABLES ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY.

N=30

S. No.	Demographic Data	No	Percentage
1.	**Age in year**		
	a) 41-50 years	4	13.3%
	b) 51-60 years	14	46.7%
	c) 61-70 years	12	40%
2.	**Gender**		
	a) Male	18	60%
	b) Female	12	40%
3.	**Marital Status**		
	a) Married	28	93.3%
	b) Unmarried	2	6.7%
4.	**Religion**		
	a)Hindu	15	50%
	b)Christian	8	26.7%
	c) Muslim	7	23.3%
5.	**Residential Area**		
	a) Urban	24	80%
	b) Rural	6	20%
6.	**Educational status**		
	a) Illiterate	2	6.7%
	b) Primary level	2	6.7%
	c) Higher secondary level	14	46.6%
	d) Graduate level	12	40.0%

7.	**Nature of Job**		
	a) Heavy	6	20%
	b) Moderate	10	33.4%
	c) Sedentary	14	46.6%
8	**Family In come per month**		
	a) Upto Rs.3000	0	0%
	b) Rs. 3001- 5000	8	26.6%
	c) Rs. 5001 – and above	22	73.4%
9	**Personal Habits**		
	a) Nil	12	40.0%
	b) Tobacco chewing	4	13.4%
	c) Smoking	7	23.3%
	d) Alcohol	7	23.3%
10	**History of co-morbid disease**		
	a)Diabetes Mellitus	12	40%
	b) Hypertension	8	26.7%
	c) Both Diabetes and Hypertension	10	33.3%
11	**Type of Meal pattern**		
	a) Vegetarian	8	26.6%
	b) Non Vegetarian	22	73.4%
12	**History of Previous Hospitalization**		
	a) Yes	23	76.7%
	b) No	7	23.3%

Table – 4.1 shows the distribution of respondents according to certain demographic factors like, age in years, gender, marital status, religion, residential area, educational status, working pattern, family income, personal habits, history of co – morbid diseases, type of meal pattern and history of previous hospitalization.

Out of 30 clients four (13.3%) clients were in the age group of 41-50 years, 14 (46.7%) clients were in the age group of 51-60 years, 12 (40.0%) clients were in the age group of 61-70 years. Regarding gender 18 (60%) clients were male and 12 (40%) clients were female. Regarding marital status 28 (93.3%) clients were married and two (6.7%) were unmarried. Out of 30 clients 15 (50%) clients were Hindu, seven (23.3%) were Muslim and eight (26.7%) were Christian. Regarding residential area 24 (80%) clients were from urban area and six (20%) from rural area. Regarding educational status of the clients, two (6.7%) were in primary level, 14 (46.6%) clients were higher in secondary level and 12 (40%) clients were educated to the graduate level.

With regard to the nature of Job 6 (20%) heavy worker, 10 (33.4%) were Moderate worker 14 (46.6%) sedentary workers. In case of monthly income eight (26.6%) had a monthly income Rs. 3001 – 5000 in that 22 (73.4%) were in the income group of Rs. 5001 and above. Out of 30 clients 8(26.6%) clients were vegetarian. 22(73.4%) clients were non vegetarian. Regarding history of previous hospitalization 23 (76.7%) clients had previous hospitalization seven (23.3%) clients did not have previous hospitalization.

SECTION - B

TABLE – 4.2

FREQUENCY AND PERCENTAGE DISTRIBUTION OF HEALTH STATUS ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY.

. **N = 30**

S. No	HEALTH STATUS	Pre test assessment		Post test assessment	
		No.	%	No.	%
1	Poor health status (75% and above)	22	73.4%	0	0
2.	Fair health status (50-75%)	8	26.6%	6	20%
3.	Good health status (Below 50%)	0	0	24	80%

Above Table – 4.2 shows that at the time of immediate post operative period, health status of the clients were assessed, among 30 clients 22 (73.4%) clients were in poor health status eight (26.6%) were in fair health status. At the time of discharge the health status of the clients were assessed. Out of 30 clients 24 (80%) were in good health status, six (20%) were in fair health status.

SECTION - C

Table 4.3

COMPARISON OF MEAN AND STANDARD DEVIATION OF PRE TEST ASSESSMENT AND POST TEST ASSESSMENT SCORE OF CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY

N = 30

S. No	GENERAL HEALTH STATUS	MEAN	S.D	C.I
1.	Pre test assessment	63.4	5.73	64.48 – 62.39
2.	Post test assessment	25.43	5.06	27.32 – 23.54

Table 4.3 shows that the pre test assessment mean score was 63.4 with the standard deviation 5.73 and post test assessment mean score was 25.43 with the standard deviation 5.06. The conclusion of above table, reveals that the post test assessment mean score was lower than the pre test mean score. It indicate that in post test of assessment. General health status of coronary artery bypass grafting surgery clients were improved in their health status. .

SECTION- D

Table 4.4

MEAN AND STANDARD DEVIATION OF IMPROVEMENT SCORE FOR CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY.

N = 30

S. No.	HEALTH	MEAN	S.D	't' Value
1.	Improvement score	38.1	6.4	20.5

Table 4.4 shows the mean and standard deviation of improvement score for effectiveness of nursing care on clients who have undergone coronary artery bypass grafting surgery. The improvement score of mean value is 38.1 and standard deviation is 6.4. 't' value is 20.5. The calculated value was greater than tabulated implies that there was statistically highly significant improvement in health status of client who have undergone coronary artery bypass grafting surgery, at 0.01 level of significance. So it is concluded that the nursing care was highly effective on clients who have undergone coronary artery bypass grafting surgery .

SECTION - E

Table 4.5

CORRELATION BETWEEN SELECTED DEMOGRAPHIC VARIABLES AND EFFECTIVENESS OF NURSING CARE ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY.

S. No	Demographic variables	Pre test assessment				Post test assessment				r
		Poor>75%		Fair 51-75%		Good <50%		Fair 51-75%		
		No	%	No	%	No	%	No	%	
1.	Age in years									
	a) 41-50 years	2	6.6	2	6.6	3	10	1	3.3	0.8*
	b) 51-60 years	12	40	2	6.6	13	43.3	1	3.3	
	c) 61-70 years	8	26.6	4	13.3	8	26.6	4	13.3	
2.	Gender									
	a) Male	13	43.3	5	16.6	16	53.3	2	6.6	0.7*
	b) Female	9	30.0	3	10.0	8	26.6	4	13.6	
3.	Marital Status									
	a) Married	21	70	7	23.3	23	76.6	5	16.6	0.3
	b) Unmarried	1	3.3	1	3.3	1	3.3	1	3.3	
4.	Religion									
	a)Hindu	10	33.3	5	16.6	14	46.6	1	3.3	0.9*
	b)Christian	7	23.3	1	3.3	7	23.3	1	3.3	
	c) Muslim	5	16.6	2	6.6	3	10.0	4	13.3	
5.	Residential area									
	a) Urban	18	60	6	20	18	60	6	20	0.6*
	b) Rural	4	13.3	2	6.6	6	20	0	0	
6.	Educational status									
	a) Illiterate	1	3.3	1	3.3	1	3.3	1	3.3	
	b) Primary	2	6.6	0	0	1	3.3	1	3.3	0.2
	c) Higher secondary	10	33.3	4	13.3	11	36.6	3	10.0	
	d)Graduate	9	30	3	10	11	36.6	1	3.3	

7.	Nature of Job									
	a) Heavy	5	16.6	1	3.3	6	20.0	0	0.0	0.9*
	b) Moderate	7	23.3	3	10	10	33.3	0	0	
	c) Sedentary	10	33.3	4	13.3	8	26.6	6	20.0	
8	In come per month									
	a) Below Rs.3000	0	-	0	-	0	-	0	-	0.1
	b) Rs.3001- 5000	7	23.3	1	3.3	6	20	2	6.6	
	c) Rs.5001– and above	15	50	7	23.3	18	60	4	13.3	
9	Personal Habits									
	a) Nil	10	33.3	2	6.6	9	30	3	10	
	b) Tobacco chewing	2	6.6	2	6.6	4	13.3	0	0	0.3
	c) Smoking	4	13.3	3	10	7	23.3	0	0	
	d) Alcohol	6	20	1	3.3	4	13.3	3	10	
10	History of co-morbid disease									
	a) Diabetes Mellitus	9	30	3	10	9	30	3	10	
	b) Hypertension	6	20	2	6.6	7	23.3	1	3.3	0.3
	c) Both diabetes mellitus and hypertension	7	23.3	3	10	8	26.6	2	6.6	
13	Type of Meal pattern									
	a) Vegetarian	7	23.3	1	3.3	4	13.3	4	13.3	0.5*
	b) Non-Vegetarian	15	50	7	23.3	20	66.6	2	6.6	
14	History of Previous Hospitalization									
	a) Yes	15	50	8	26.6	18	60	5	16.6	0.4
	b) No	7	23.3	0	0	6	20	1	3.3	

*significant

Table 4.5 reveals that there was statistically significant positive correlation between demographic variables like age in years, gender, religion, residential area, nature of job, type of meal pattern and effectiveness of nursing care on clients who have undergone coronary artery bypass grafting.

Finding of this study

The study findings showed that pretest assessment mean was 63.4 with standard deviation 5.73 and post test assessment mean of 25.4 with standard deviation of 5.6. The improvement score shows that the mean was 38.1 with standard deviation of 6.4, ‘t’ value is 20.5. It shows that nursing care was highly significant at $p<0.001$ level. The correlation value showed that there is positive correlation between demographic variables and effectiveness of nursing care on clients who have undergone coronary artery bypass grafting.

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The overall finding showed that the nursing care was very effective in improving health status of clients in terms of maintenance normal body temperature, improved fluid and electrolyte balance, nutritional status, wound healing process, prevention of complications, improved coping abilities of clients and family members. So finally, it was concluded that pre and post operative nursing care was highly effective for clients who have undergone coronary artery bypass grafting.

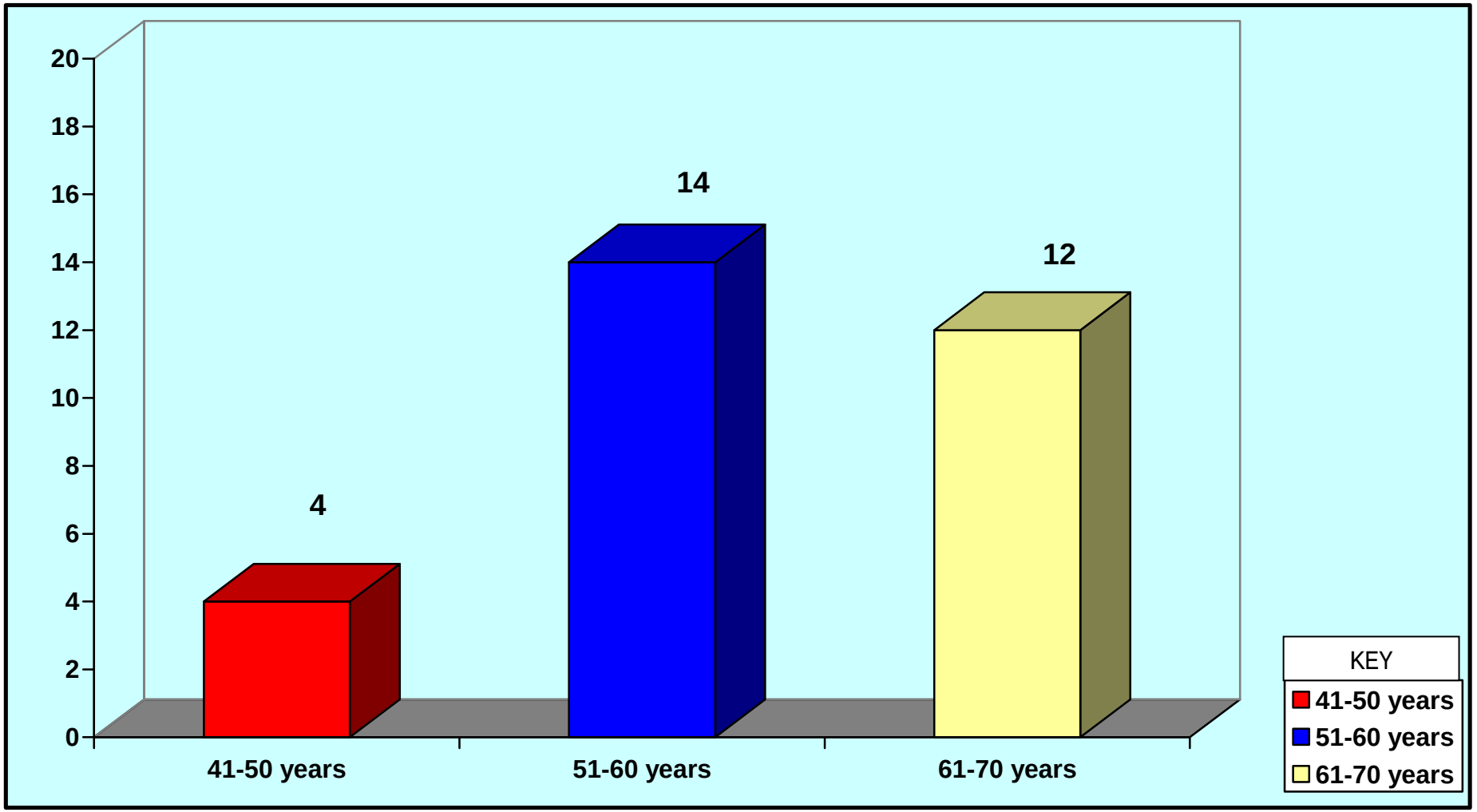

Figure -4.1 : PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES BASED ON AGE GROUP

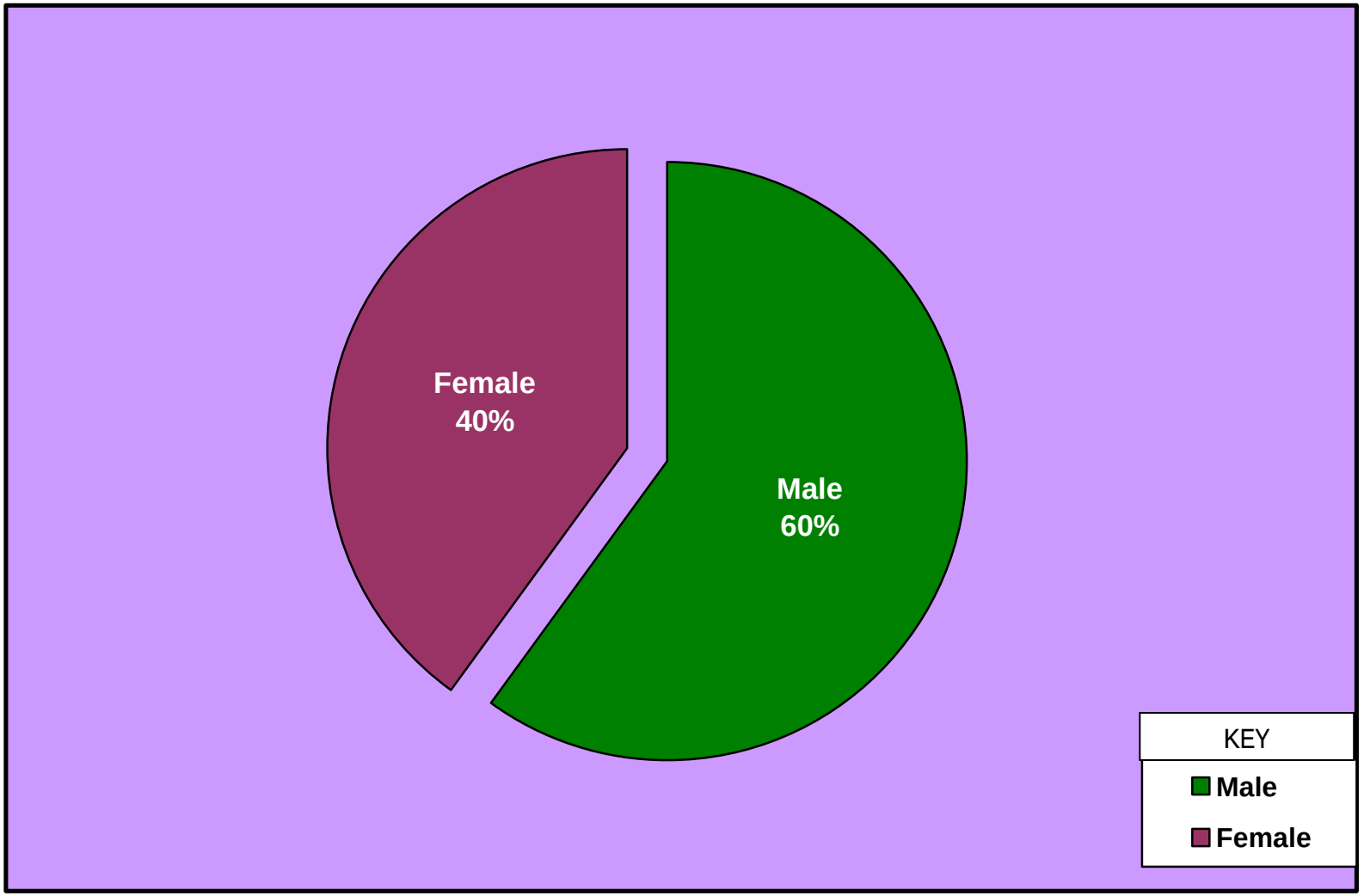

Figure -4.2 : PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES BASED ON GENDER

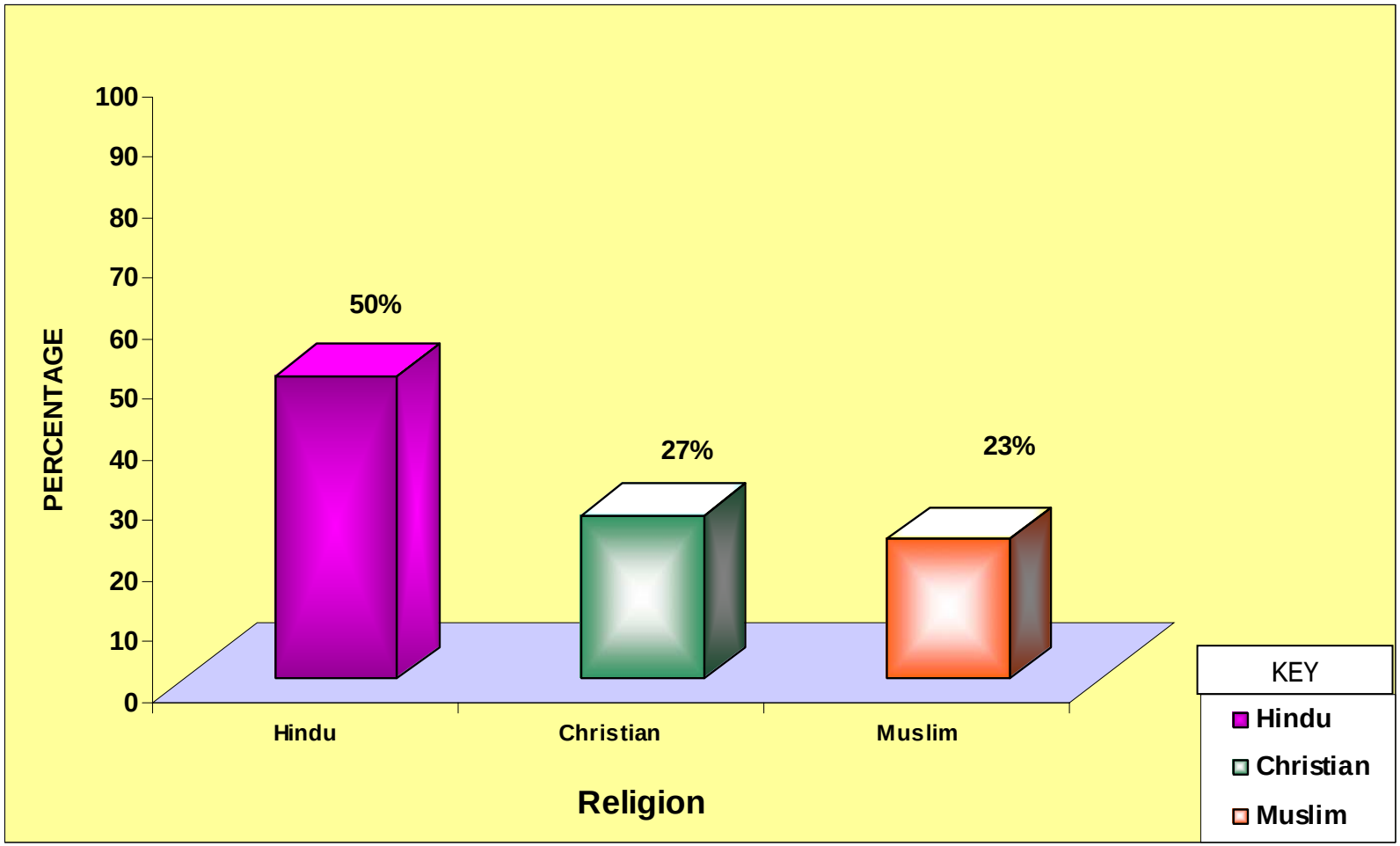

Figure -4.3 : PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES BASED ON RELIGION

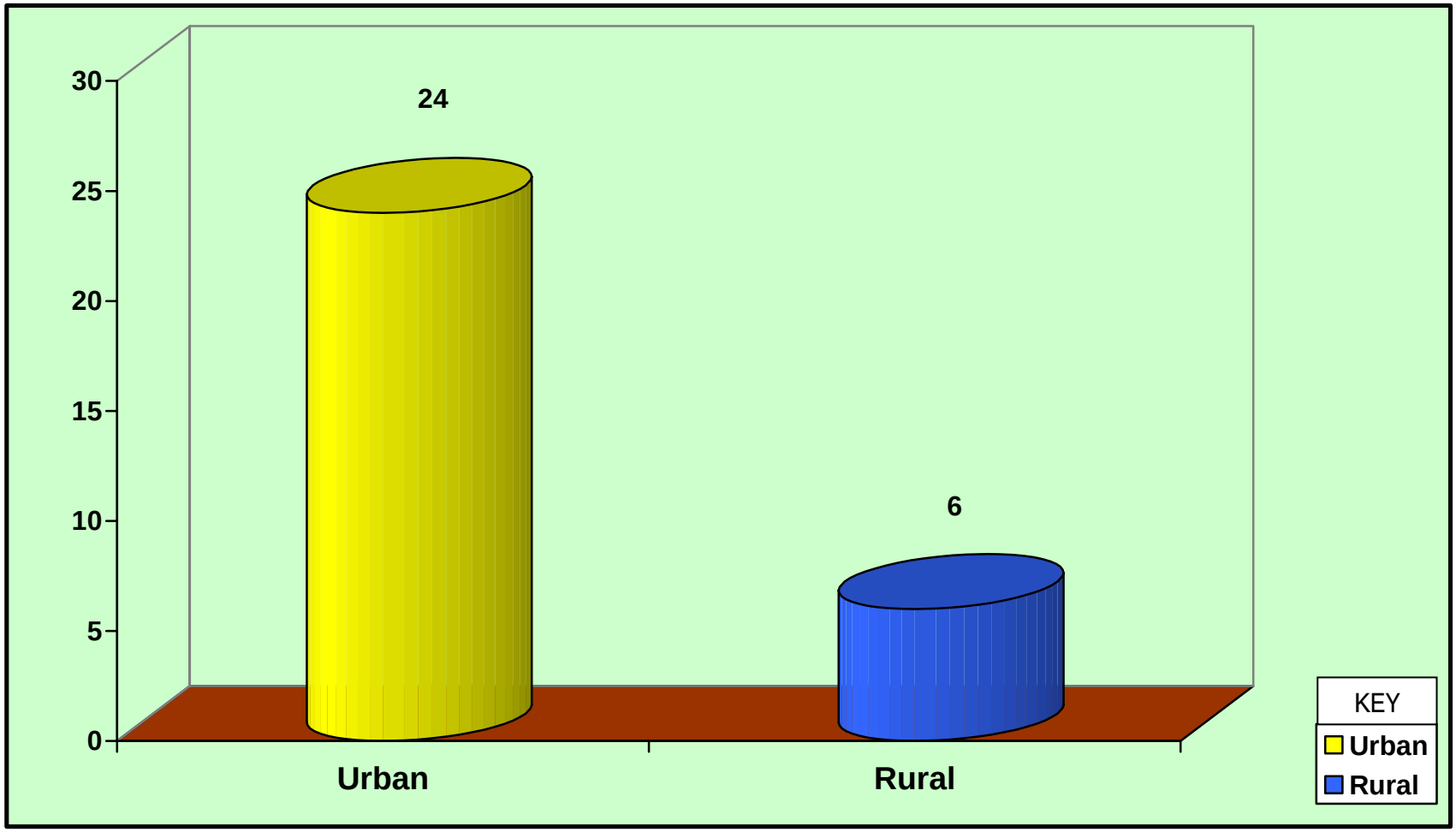

Figure -4.4 : PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES BASED ON RESIDENTIAL AREA

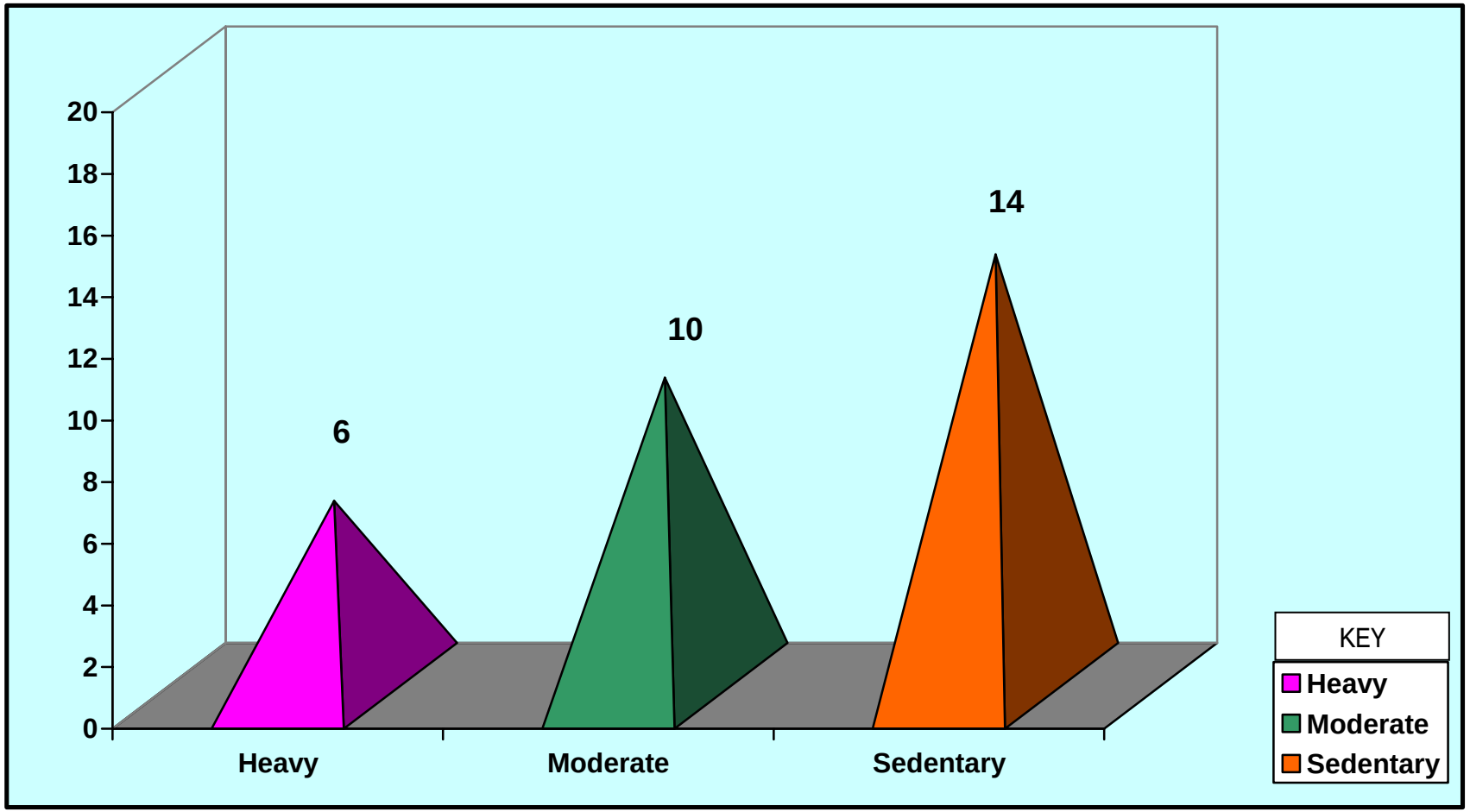

Figure -4.5 : PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES BASED ON NATURE OF JOB

CHAPTER – V

RESULTS AND DISCUSSION

The aim of the present study was to evaluate the effectiveness of nursing care on clients who have undergone coronary artery bypass grafting surgery. Total number of 30 clients were selected for the study. Nursing care which includes both pre operative and post operative. Nursing care was given as per nursing protocol and at the time of discharge the evaluation was done by using self structured general health status assessment rating scale. The result of the study had been discussed according to the objectives of the study conceptual frame work and on related literature.

The First objective assess the health status of clients who have undergone coronary artery bypass grafting surgery.

The study was conducted in intensive care unit of Life Line Hospital Chennai. Thirty (30) clients who have undergone coronary artery bypass grafting surgery and who met inclusion criteria were included in the study. All parameters had been carefully monitored and preoperative nursing care was provided to them effectively. To prepare the clients for surgery to avoid complications after surgery.

Each clients was assessed with information of demographic variable. They were observed and rated by using self structured general health status assessment rating scale and with observational check list in assessment 22 were in severe health status eight clients were in moderate health status and health status with mean 63.4 and standard deviation of 5.73.

Colella TJ, Faris P. (2004), Coronary artery bypass grafting surgery is one of the most frequently performed major surgeries in all over the world. Because of fast track protocols and decreased length of stay, critical care nurses have even more demanding challenges in the care of these clients. Critical care nurses are well aware that these clients still have health needs that extend beyond discharge from the hospital.

The Second objective was to evaluate the effectiveness of post operative nursing care on clients who have undergone coronary artery bypass grafting surgery.

Each day clients were treated based on nursing intervention protocol. The health status was observed and assessed. This was rated by using self general health status structure assessment

rating scale. The findings of this study revealed statistically significant in effectiveness of nursing intervention.

Assessment and evaluation score showed the difference between before and after nursing care, on post test assessment the overall mean was 25.43 with standard deviation of 5.06 the improvement score with the pre test assessment and post test assessment showed the mean of 38.1 with the standard deviation of 6.4.

It implies that there was statistically highly significant improvement in health status of clients who have undergone coronary artery bypass grafting surgery. Thus the post operative nursing care was very effective.

Sampson BK, **Doran KA. (2006)** indicates that the shortened hospital stays could potentially lead to unmet patient needs. To identify the health needs of coronary artery bypass grafting surgery patients at time of discharge. The most common health needs were education about, sleep, rest, rehabilitation and follow up care. Nursing implications relating to these health needs are also identified and it improve the health status of clients with coronary artery bypass grafting surgery.

Third objectives was to find out the correlation between demographic variables with clients who have undergone coronary artery bypass grafting surgery.

The correlation proved that there was significant positive correlation between the demographic variables like age in years, gender, religion, residential area, nature of job, type of meal pattern.

There was negative correlation between the demographic variables like marital status, educational status, family income, personal habits, history of co-morbid disease, history of previous hospitalization and effectiveness of nursing care on clients who have undergone coronary artery bypass grafting.

CHAPTER – VI

SUMMARY AND CONCLUSION

The present study was conducted to evaluate the effectiveness of the nursing care on clients who have undergone coronary artery bypass grafting surgery. The study was evaluative research design. A total 30 clients who have undergone coronary artery bypass grafting surgery and who met the inclusion criteria. The study sample are selected from Life Line Hospital at Chennai, by using the probability simple random sampling technique.

The investigator first introduced to the clients and developed a rapport with them. After sample selection the assessment was done. Based on the assessment the nursing care was given. From the pre operative and immediate post operative period to seventh post operative day of clients who have undergone coronary artery bypass grafting surgery.

The objective of this research were to assess the health status of clients who have undergone coronary artery bypass grafting surgery.

To evaluate the effectiveness of nursing care on clients who have undergone coronary artery bypass grafting surgery and to find correlation between demographic variables with effectiveness of nursing care.

CONCLUSION

In assessment of 30 samples, most of clients had chest pain, dyspnea, impaired fluid and electrolyte balance, oliguria, acidosis. As soon as nursing care was provided as per protocol. In post test assessment of nursing care the clients maintenance normal body temperature, improved fluid and electrolyte balance, nutritional status, wound healing process, prevention of complications, improved coping abilities of clients and family members.

There was statistical significant improvement in health status of clients who have undergone coronary artery bypass grafting surgery in relation to effectiveness of nursing care.

IMPLICATION FOR NURSING PRACTICE

provide care and comfort as they carried out specific nursing functions. The planned nursing intervention are to be scheduled in

the clinical setup in the fixed data with time for the clients as well as to the family members.

This study will provide a great insight among the nurses to identify defects and certain problems like, dyspnea, chest pain, tachycardia, bradycardia, cardiogenic shock and pulmonary edema, through careful assessment which will guide them to provide life support measures, appropriable to prevent surgical complications in order to save the life of clients who have undergone coronary artery bypass grafting surgery.

The study implies that the nurse should help the clients to regain health through the healing process. Surgical wound healing requires effective care than just curing a specific disease.

IMPLICATIONS FOR NURSING EDUCATION

Nurse educators when plan to instruct the students, should provide adequate opportunity for them to develop the skills for handling clients who have undergone coronary artery bypass grafting surgery and provide care in both community and clinical settings.

The educational programme on educative role of the nurses along with adequate supervision of nursing service would motivate nurses to carry out nursing interventions.

This study implies the nurse educator to conduct and motivate learner to select a relevant study with all dimension namely physical mental, emotional, social and spiritual changes encountered by clients who have undergone coronary artery bypass grafting surgery.

IMPLICATIONS FOR NURSING RESEARCH

Nursing today is involved every issues in critical care unit due to changes in health care delivery systems. Advancement of technology like monitor ventilator infusion devices etc. development of new discipline in medicine, nursing need to be developed to study in specific areas of problems encountered by the clients who have undergone coronary artery bypass grafting surgery. This study directs the nursing personnel to broaden their knowledge and skills and elicit problems and to conduct many more research to raise them power to implement prompt care activities.

The finding of the study helps the professional nurses and students to develop the inquiry by providing a baseline care. This study helps in nursing research to develop in depth into the better development of nursing care interventions and information of clients who have undergone coronary artery bypass grafting surgery towards promotion of healthy life and prevention of omplications.

IMPLICATIONS ON NURSING ADMINISTRATOR

The nurse administrator manages the Coronary artery bypass grafting surgery client to care and the delivery of specific nursing service within the health care agency. The nurse administrated should take necessary action part in health policy making developing protocol, procedures and standing orders related to cardiac rehabilitation education.

The nursing administration should give attention on the proper selection, placement and effective utilization of the nurses in all areas within the available resources, giving importance for their creativity interest, ability in education of cardiac rehabilitation and prevention of cardiac disease.

The nurse administrators on educative role of the nurses, should have adequate supervision of nursing services and provide adequate in service education programme.

RECOMMENDATIONS

- The similar study can be conducted in a larger group of samples
- This study can be conducted to assess the effectiveness of cardiac rehabilitation measures in reducing the recurrence of complications of coronary artery bypass grafting surgery
- The effectiveness of nursing care in modifiable risk factors of coronary artery bypass grafting surgery clients with hypertension.
- A comparative study can be done in rural and urban population, who have undergone coronary artery bypass grafting surgery.
- The study helps to provide effective nursing care for clients who have undergone coronary artery bypass grafting surgery.
- A study could be done on the knowledge and skills of the nurses regarding coronary artery bypass grafting surgery.
- A study could be done to determine the effects of teaching on the practice of self care activities.

BIBLIOGRAPHY

1. Basavanthappa, B.T. (2003), **Medical surgical Nursing**, 1st edition, Jaypee Brothers medical publishers, New Delhi.
2. Beare and Myres, (1998), **Adult health nursing**, 3rd edition, Mosby Company, Philadelphia.
3. Black, J.M., Jacog S, E. M. (1997), **Medical surgical Nursing**, Clinical management of continuity care, 5th edition, WB Saunders Company, Philadelphia.
4. Brunner and Sudharth's **Text book of medical surgical nursing**, 8th edition, Lipincott, Philadelphia.
5. Burns N. and Grove.S.K. (1999), **understanding nursing Research** , 2nd edition, W.B. Saunders Company, Philadelphia.
6. Davidson (2002), **Principles and practice of medicine**, 19th edition, Churchill Livingstone Publishers, New York.
7. Dugas, (1983) Introduction to patient care, 4th edition, W.B. Saunders Company, Philadelphia.
8. Golwalla, (1994) **Medicine for students** 10th edition, S.V. Limayn India Printing house, Bombay.
9. Gupta S.D. (2004), **Statistical Methods**, 32nd edition, Sultanchand and Son's education publishers, New Delhi.

10. Holloway N.M (1999), **Medical Surgical care planning**, 3rd edition , spring house publications, Pennsylvania.

11. Ignastviccus Donna, V., Workman Linda (2004), **Text book of Medical Surgical Nursing**, 4th edition, W.B. Saunders Company, Philadelphia.

12. Kemp, et al (1984) **Fundamentals of nursing**, 2nd edition, foresman and company. London, Scott.

13. Kozler, B., Erb Glenox, Blais Kathileen and Wilkinson, M.J. (1995) **Fundamentals of nursing concept process and practice**, 5th Edition California, a eldison-Wesky nursing.

14. Lewis S.M., Heilkeper, M.M. & Dirksen S.R. (2007) **Medical Surgical Nursing assessment and management of clinical problems**, 5th edition, Mosby publication, London.

15. Marutha R.A. Ann. M. & Turney (1997) **Nursing theory utilization and application**, 1st edition, Mosby, St. Louis.

16. Polit, D.F. and Hungler, B.D. (1999), **Nursing research principles and methods**, 6th edition, Lipincott, Philadelphia.

17. Potter, A.P., and Perry, A.G. (1997) **Fundamentals of nursing** 4th edition, Mosby, St. Louis.

18. Shafers, (1997) **Medical Surgical Nursing**, 7th edition, BI Publications Private Limited, New Delhi.

JOURNAL REFERENCES

1. Aish .A , **A comparsion of female and male cardiac patients response**, Indian Journal of clinical practice, Medinews, Vol-13.

2. Anderso, **patient perceived quality of life after coronary artery bypass surgery**, Journal of International medicine.

3. Bassam, **Hemodynamics status of patients with coronary artery disease**, Journal of Indian Medical Association, Vol.99, No.9, PP 70-73.

4. Campean.L **Rehabilitation after coronary artery bypass grafting**, Journal of cardiology, Vol.76, No.9, PP 60-66.

5. Daida .H, **Relation of saphenous view graft obstruction to serum cholesterol level**, Journal of American cardiology.

6. Yoki, **Patients information needs of recently diagnostic cardiac patients**, Medical Times, Vol.29, No.12, PP 1-3.

7. Miyoua, **Significance of graft occlusion and coronary artery** , Journal of International medicine, Vol.36, No.9, PP 60-66.

8. Westerfield, **Factors influencing coronary artery bypass grafting,** Asian journal of clinical cardiology, Vol.1, No.13, PP 11.
9. John, **Home recovery intervention follow coronary artery bypass grafting**, British Medical Journal, Vol-304, PP 1015-1019.
10. James Watson, **Gender difference and Hearth health life style,** Indian Health Journal, Vol-39, PP 57-59.
11. Mary, **Nurses role in patients education,** Indian Journal of clinical practice, Medi news, Vol-8.
12. Lee, **Surgical management of CAD**, The cardiothoracic Journal, Vol-3, No.4.
13. Zhous, **Management of chronic stable angina**, Medical Times, Vol.29, No.12, PP 1-3.
14. Yesh, **Emerging new global cardiovascular risks**, Indian Journal of clinical practice, Medinews, Vol-15.
15. Zsoaa, **Prognosis of systolic heart failure patient under gone CABG,** Journal of Indian Medical Association, Vol.99, No.9, PP 70-73.

WEB SITE

1. http://www.google.com
2. http://pubmed.com

APPENDIX - I

DEMOGRAPHIC VARIABLES

1. Age in years

a) 41-50 years ☐
b) 51-60 years ☐
c) 61-70 years ☐

2. Gender

a) Male ☐
b) Female ☐

3. Marital Status

a) Married ☐
b) Unmarried ☐

4. Religion

a)Hindu ☐
b)Christian ☐
c) Muslim ☐

5. Residential area

a) Urban ☐
b) Rural ☐

6. Educational status

a) Illiterate ☐
b) Primary ☐
c) Higher secondary ☐
d) Graduate ☐

7. Nature of Job

a) Sedentary ☐
b) Moderate ☐
c) Heavy ☐

8. Income per month

a) Below Rs.3000 ☐
b) Rs. 3001- 5000 ☐
c) Rs. 5001 and above ☐

9. Personal Habits

a) Nil ☐
b) Tobacco chewing ☐
c) Smoking ☐
d) Alcohol ☐

10. History of co morbid disease

a) Diabetes Mellitus ☐
b) Hypertension ☐
c) Diabetes Mellitus & Hypertension ☐

11. Type of Meal pattern

a) Vegetarian ☐
b) Non-Vegetarian ☐

12. History of Previous Hospitalization

a) Yes ☐
b) No ☐

APPENDIX - II

PREOPERATIVE OBSERVATION CHECK LIST ON NURSING INTERVENTION ON CLIENTS WITH CORONARY ARTERY DISEASE

S. NO	NURSING INTERVENTION
1.	Monitor vital parameters
2.	Provide adequate ventilation
3.	Assess the level of pain
4.	Provide pain relief and comfort measures.
5.	Assess the hemodynamic and cardiac status
6.	Maintenance of intake and output chart
7.	Maintenance of nutrition
8.	Preoperative medication
9.	Preoperative exercise
10.	Preoperative physical preparation
11.	Consent
12.	Observe for bowel and bladder pattern
13.	Preoperative health education

APPENDIX – III

POST OPERATIVE OBSERVATION CHECK LIST ON CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY

S. No	ITEMS	0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Discharge day
1.	**Temperature** a. Normal (97°F - 99°F) b. Abnormal (<97°F and > 99°f)									
2.	**Pulse Rate** a. Normal (60-100b/mts) b. Abnormal (<60 and> 100/mts)									
3.	**Respiratory Rate** a. Normal (16-20 breath/min) b. Abnormal (<10 and > 20 breath/min)									
4.	**Blood Pressure** a. Normal Systolic : 100 – 140 mm Hg Diastolic:60–090 mm Hg b. Abnormal Systolic <100->140 mm Hg Diastolic : <60-> 90mm Hg									
5.	**Urine output** a.Normal 0.5ml /kg / hour b.Abnormal Oliguria									
6.	**Abdominal Distension** a. Absent b. Present									
7.	**Wound status** a. Healthy b. Unhealthy									
8.	**Wound drainage** a.Normal : Absent b.Abnormal : Oozing									
9.	**Intake and output** a. Normal b. Abnormal									
10.	**Drainage tube** a.Normal : Minimal drainage b.Abnormal : Oozing									
11.	**Edema** a.Normal : Absent b.Abnormal : Present									
12.	**Skin Turgor** a. Normal b. Abnormal									

APPENDIX – IV

SELF STRUCTURED GENERAL HEALTH STATUS ASSESSMENT RATING SCALE FOR CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY

S.No	CRITERIA	NO. OF DAYS							
		SCORE	1	2	3	4	5	6	7
1.	Temperature a. Normal b. Low Fever c. High Fever	 1 2 3							
2.	Pain a. Mild b. Moderate c. Severe	 1 2 3							
3.	Respiration a. Able to breath freely b. Dyspnea c. Apnea	 1 2 3							
4.	Oxygen Saturation a. 90% to 100% at atmospheric air b. Need oxygen administration to maintain 90% O_2 saturation c. Oxygen saturation <90% with O_2 administration	 1 2 3							
5.	Level of Conscious a. Fully awake b. Arousable on calling c. Not responding	 1 2 3							

6.	Heart Rate a. Normal b. Tachycardia c. Bradycardia	 1 2 3							
7.	Circulation (Blood pressure) a. Normal b. Hypertension c. Hypotension	 1 2 3							
8.	Peripheral pulse a. Palpable b. Diminished c. Absence	 1 2 3							
9.	Capillary refilling time a. With in seconds b. 2 to 3 seconds c. 4 seconds	 1 2 3							
10.	Skin Colour a. Pink b. Pale c. Cyanosed	 1 2 3							
11.	Urination Pattern a. Normal voiding b. Voiding with catheter c. Dysuria	 1 2 3							
12.	Edema a. No edema b. 2– 4mm c. morethan 4mm	 1 2 3							
13.	Hydration a. Mild dehydration b. Moderate dehydration c. Severe dehydration	 1 2 3							
14.	Weight Gain a. Mild b. Moderate c. Severe	 1 2 3							

15.	Wound Healing a. Good b. Fair c. Poor	 1 2 3							
16.	Range of Physical Movement a. Good b. Fair c. Poor	 1 2 3							
17.	Pressure sore a. Mild b. Moderate c. Severe	 1 2 3							
18.	Bowel Sound a. Good b. Fair c. Poor	 1 2 3							
19.	Change of Position a. <1 hour b. 1 - 2 hours. c. 2 - 8hours	 1 2 3							

APPENDIX – V

NURSING PROTOCOL FOR CLIENTS WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING SURGERY

S.No	Interventions	Rationale
1	**Assess Vital Signs** ✓ Temperature ✓ Heart rate ✓ Heart sounds ✓ Blood pressure ✓ Respiration ✓ Check peripheral pulse	➢ Assessment of heart rate and sounds helps to identify the deviation from normal. ➢ Blood pressure is measured to determine hypertension and hypotension. ➢ Peripheral pulses are evaluated to determine fluid status.
2	**Adequate Ventilation** ➢ Assess respiratory function as soon as the client is received from the operating room ➢ Assess for respiratory rate, depth and use of accessory muscles ➢ Check for dyspnea, bradypnea or tachypnea. ➢ Auscultate breath sounds bilaterally ➢ Administer saturated oxygen as prescribed, 4 – 6 Lit/min. ➢ Monitor arterial blood gas analysis ➢ Apply suctioning if client not able to cough. ➢ Hyperventilate with 100% oxygen, endotracheal tube suction between each pause ➢ use sterile suction technique ➢ Assess characteristics of secretion (colour, odour, amount and consistency) ➢ Encourage deep breathing exercise. ➢ Turn the client every two hourly.	➢ Adequate ventilation are important for vital function ➢ It help for planning oxygen therapy. ➢ Presence of rales, wheeze or crackle suggest increased pulmonary secretions. ➢ Determine the effect of oxygen therapy and alveolar capillary gas exchange. ➢ To identify respiratory acidosis ➢ Suctioning remove the secretion and maintain airway clearance. ➢ Prevent the hypoxia to vital tissues ➢ Sterile technique, prevent transmission of infections. ➢ Helps Identify the sign of infection. ➢ This helps to full expansion of lungs and mobilizes secretions.

3.	**ECG Monitoring** ➢ Appearance of ST elevation and Q wave present.	➢ Appearance of ST elevation and Q wave indicate ischemia
4.	**Management of Pain** ➢ Assess the severity of pain with visual analogue scale ➢ Provide comfortable position ➢ Change the position for every hourly. ➢ Provide semi fowlers position. ➢ Administered medications as prescribed e.g. morphine, Tramadol. ➢ Avoid bed linen in contact with surgical incision	➢ Helps to plan pain Management Measures. ➢ Comfort positioning reduces the feeling of pain. ➢ Position changing reduces the pressure over the bony areas. ➢ Medication are essential for relieve pain. ➢ Prevent rubbing and skin irritation.
5.	**Maintaining fluid volume** ➢ Maintain and establish two Peripheral lines. ➢ Maintain intake / output chart properly ➢ Assess for edema especially in dependent parts ➢ Make intravenous fluid plan accurately ➢ Report urine output less than 0.5ml /kg/ hr	➢ Helps to administer fluids to prevent dehydration. ➢ Identify the fluid imbalance or over load and complication ➢ Edema indicate fluid overload ➢ Maintain the hydration ➢ It help to know the renal function.
6.	**Wound Management** ➢ Watch the surgical site for oozing ➢ Do sterile dressing daily and apply medication as prescribed.	➢ Oozing indicate the signs of infection ➢ Sterile dressing reduces the growth of micro organisms.
7.	**Comfort Measures** ➢ Provide comfortable position ➢ Change the position every hourly ➢ Monitor temperature provide blanket if necessary	➢ Comfortable position prevent the physical stress ➢ Reduces the pressure over bony areas. ➢ Maintain thermoregulation

8.	**Dietary Management** ➢ Keep nil per oral till ordered ➢ Provide liquids and semi solid diet ➢ Plan menu according to the diet advised or as tolerated. ➢ Advise the client and family members from low fat and low cholesterol diet. ➢ Low sodium diet	➢ Oral diet can be instituted after the bowel sound heard. ➢ Liquid and semisolid are easy for digestion. ➢ Promotes nutritional status ➢ Fat and cholesterol will increase risk of thrombosis. ➢ Sodium will increase fluid retention and edema
9.	**Prevention of complication** Advice the client for the following ➢ Regular medications as prescribed and Regular check-up ➢ Avoid strenuous exercises ➢ Life style modification like avoiding smoking and alcohol consumption.	➢ It helps to control the risk factors like diabetes mellitus blood pressure for early detection of disease and complications. ➢ Strenuous exercises will cause chest pain ➢ Smoking and alcohol consumption will increase the risk of coronary artery disease.
10.	**Exercise Activity** ➢ The clients are usually limited to bed rest. ➢ Exercise begins slowly from 5 to 30 minutes for 3-4 times a week. ➢ Low duration exercise (5-10min) can be done daily.	➢ Exercise is the integral part of the cardiac rehabilitation programme. ➢ Early ambulation is encouraged to prevent thrombosis.

APPENDIX - VI

PRE OPERATIVE NURSING CARE PLAN

- Impaired cardiac tissue perfusion related to myocardial injury as evidence by chest pain and radiating pain over the neck, jaw.
- Acute pain related to myocardial ischemia as evidenced by severe chest pain, tightness, radiation of pain to the neck and arms.
- Impaired gas exchange related to decreased cardiac output as evidenced by increased heart rate and dyspnea.
- Imbalance nutritional status less than body requirement related to nausea and vomiting as evidence by weakness.
- Knowledge deficit related to surgery and follow up care.
- Fear and anxiety related to diagnosis and treatment about disease condition.

S. No	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
1.	Subjective Data: The clients complaints of giddiness, palpitation, chest pain, excessive sweating Objective Data: The clients looks dullness and weakness	Impaired cardiac tissue perfusion related to myocardial injury as evidence by chest pain and radiating pain over the neck, jaw.	The clients cardiac output will improve	➢ Monitor vital signs, heart rate, respiration and blood pressure ➢ Assess the peripheral pulses ➢ Administer oxygen as per order. (4Lit/Min) ➢ Maintain adequate ventilation and perfusion ➢ Administer IV fluid as per order. ➢ Provide quite relaxed environment and restrict activity. ➢ Monitor fluid balance (e.g. intake/output)	➢ Monitored vital signs, heart rate, respiration and blood pressure ➢ Assessed the peripheral pulses ➢ Administered oxygen ➢ Maintained adequate ventilation and perfusion ➢ Administered IV fluid as per order. Provided quite relaxed environment and restricted activity. ➢ Monitored fluid balance (e.g. intake/output)	➢ Baseline data help to plan further intervention. ➢ Weak pulse indicate decrease cardiac output ➢ It helps to meet oxygen demands ➢ It helps to meet oxygen demands ➢ It help to increase fluid volume. ➢ Helps to reduce oxygen demand ➢ It helps to observe the cardiac status.	The client cardiac output was improved

S. No.	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
2.	Subjective Data: The clients complaints of chest pain and radiating over the neck Objective Data: ➢ The clients had Restlessness , irritability and change in facial grimaces, discomfort	Acute pain related to myocardial ischemia as evidence by severe chest pain, tightness, radiation of pain to the neck and arms.	The clients pain will minimize	➢ Monitor the characteristics of pain ➢ Monitor the vital parameters. ➢ Provide comfortable position ➢ Administer oxygen as prescribed ➢ Teach relaxation techniques, breathing exercises ➢ Administer analgesics ➢ Obtain 12-Lead ECG during pain episode	➢ Monitored chest pain and radiating over the neck. ➢ Monitored the vital parameters. HR=92 bts/min. ➢ Provided semi fowler's position ➢ Administered oxygen – 4 ltrs/min ➢ Taught relaxation techniques, breathing exercises ➢ Administered analgesics (e.g. Morphine) ➢ Obtained 12-Lead ECG during pain episode.	➢ Baseline data help to plan further intervention. ➢ Helps to identify the deviation in Blood pressure and Heart rate. ➢ It helps to provide comfort ➢ It helps to improve oxygen saturation ➢ It helps to reduce pain. ➢ It helps to minimize the pain ➢ It help to identify the severity of disease.	The client verbalizes ability to tolerate pain

S. No.	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
3.	Subjective Data: The clients complaints of difficulties in breathing , suffocation and chest pain, chest tightness Objective Data: Increased heart rate (92 Beats/Min), impaired capillary refilling, dypsnea and cracle sound.	Impaired gas exchange related to decreased cardiac output as evidenced by increased heart rate and dyspnea.	The clients gas exchange will improve	➢ Assess the respiratory status ➢ Provide semifowler position ➢ Administer oxygen as prescribed ➢ Monitor saturation by pulse oximetry ➢ Encourage deep breathing and coughing exercises	➢ Assessed the respiratory status ➢ Provided semi fowlers position ➢ Administered O_2 – 4 liters/min as prescribed. ➢ Monitored saturation by pulse oximetry. ➢ Encouraged deep breathing and coughing exercises	➢ Baseline data help to plan further intervention. ➢ It helps to increase antero-posterior diameter ➢ It helps to increase the blood oxygen level ➢ It help to assess the saturation . ➢ These promotes respiratory function	Client respiratory status was improved

S. No.	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
4	Subjective Data: The clients complaints of loss of appetite, nausea and vomiting. Objective Data: The clients looks tired, weakness	Imbalanced nutritional status less than body requirement related to nausea and vomiting as evidenced by weakness	The clients nutritional status will improve	➢ Assess the nutritional status ➢ Monitor the weight of the client ➢ Maintain intake and output chart ➢ Provide sodium restricted diet ➢ Restrict fatty diet ➢ Restrict the fluids as per order	➢ Assessed the nutritional status ➢ Monitored the weight ➢ Maintained intake and output chart. ➢ Provided sodium restricted diet ➢ Restricted fatty diet ➢ Restricted the fluids as per order	➢ Helps to know the general condition ➢ Helps to identify weight loss/gain ➢ Helps to know dietary pattern ➢ It helps to prevent edema ➢ Helps to reduce cholesterol levels ➢ It helps to reduce edema	The clients nutritional status was improved

POST OPERATIVE NURSING CARE PLAN

- Impaired gas exchange dyspnea related to trauma of extensive chest surgery.
- Acute pain related to surgical trauma and pleural irritation caused by chest tube drainage.
- Decreased cardiac output related to blood loss and compromised myocardial function.
- Risk for deficient fluid volume and electrolyte imbalance related to alterations in blood volume.
- Impaired renal tissue perfusion related to decreased cardiac output and hemolysis.
- Activity intolerance related to fatigue weakness and pain as evidenced by poor compliance
- Impaired skin integrity related to surgery as evidenced by redness, edema and warmth around the surgical wound
- Fear and anxiety related to healing process recovery and complication..
- Knowledge deficit related to home care management as evidenced by verbalizing queries about follow up care
- Risk for infection related surgical wound incision

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
1.	Subjective data the clients complaints of difficulty in breathing and cough with sputum. Objective Data The clients respiratory rate was increased 28breath/min, low oxygen saturation, cough with sputum, crackles sound presented.	Impaired gas exchange related to trauma of extensive chest surgery.	The clients will attain optimal respiratory function	Monitor rate rhythm and depth of respiration Maintain mechanical ventilation until the client is able to breath independently Provide Proper positioning to facilitate lung expansion Administer humidified oxygen as prescribed (4-6 Lit/min) Apply suction every two hours Provide steam inhalation Encourage deep breathing and coughing exercises Monitor Pulse oximetry .	Monitored rhythm and depth of respiration Maintained mechanical ventilation until the client is able to breath independently Fowlers position provided Administered humidified oxygen as prescribed Applied suction clear secretions Steam inhalation given Encouraged deep breathing and coughing exercises Monitored Pulse oximetry .	It provides base line data for further intervention To maintain effective ventilation It initiates comfort and easy breathing It improves the oxygen saturation of the client Suctioning clears the airway It dilutes the thick secretions These promotes respiratory function It helps to assess the oxygen status	clients airway was improved

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
2.	Subjective data The clients complaints of pain over the chest and discomfort. Objective data The clients have restless, facial grimace, fatigue.	Acute pain related to surgical trauma, pleural irritation caused by chest tube drainage.	The clients comfort will maintain and minimize the pain	Assess the location, characteristics onset, duration, frequency, quality, severity and precipitating factor of pain Provide comfortable position with comfort devices Provide calm and quiet environment Administer analgesics as prescribed Teach the use of non pharmacological techniques . Provide psychological support.	Assessed the location, characteristics onset, duration, frequency, quality, severity and precipitating factor of pain Semi fowlers position provided. Provided calm and quiet environment Administered analgesics as prescribed (e.g) Morphine, Tramadol. Taught relation and music therapy. Psychological support given	Its provides base line data for further nursing care Position can promotes physical comfort It promotes rest and sleep Analgesics reduce the pain Relaxation technique divert the mood. It gives confidence.	The client's maintained comfort and pain minimized

S. No.	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
3.	Subjective Data: The clients complaints of giddiness, palpitation Objective Data: The client looks dullness, weakness and giddiness	Decreased cardiac output related to blood loss and compromised myocardial function.	The clients cardiac output will improve	Monitor vital parameters Assess the peripheral pulses Administer oxygen As per order. (4 Lit/Min) Maintain adequate ventilation and perfusion Administer IV fluid as per order. Restrict activity, provide quite relaxed environment Monitor fluid balance (e.g. intake/output)	Monitored vital parameters Assessed the peripheral pulses Administered oxygen Maintained adequate ventilation and perfusion Administered IV fluid as per order. Restricted activity, provided quite relaxed environment Monitored fluid balance (e.g. intake/output)	Baseline data help to plan further intervention. Weak pulse indicate decrease cardiac output It helps to meet oxygen demands It helps to meet oxygen demands It help to increase fluid volume. Helps to reduce oxygen demand It helps to observe the fluid retention.	The clients cardiac output was improved

S.No.	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
4.	Subjective Data The clients complaints of fatigue, weakness tired. Objective Data client is having dehydration, dry lips, hypotension.	Risk for deficient fluid volume and electrolyte imbalance related to alterations in blood volume.	The clients fluid volume status will improve	Monitor the fluid and electrolyte imbalance Monitor arterial blood gas. Maintain intake and output chart Monitor weight daily Administer intra venous fluids as per order.	Monitored the fluid and electrolyte imbalance Monitored arterial blood gas. Maintained intake and output chart. Monitored weight daily Administered intra venous fluids as per order.	Baseline data help to plan further intervention. Helps to identify the electrolytes level. Helps to identify the fluid balance Sudden increase in weight indicates fluid overload It improve the fluid status.	The clients fluid volume status was improved to some extent.

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
5.	Subjective Data The clients complaints of difficulty in passing urine, abdominal distention. Objective Data The urine output is less than 0.5ml/kg/hr	Impaired renal tissue perfusion related to decreased cardiac output and hemolysis.	The clients urinary pattern will maintain at optimum level	Assess the renal function. Maintain intake and output chart Monitor weight Provide catheter care Check edema Administer diuretics as prescribed.(e.g. lasix) Measure urine specific gravity	Renal function is assessed Maintained intake and output chart Monitored weight Provided catheter care Checked edema Administered diuretics as prescribed Measured urine specific gravity	It promotes baseline for further plan It helps to plan fluid therapy Indicates fluid balance It prevents Urinary tract infection It prevents complication Diuretics increase the urinary out put Indicated kidney function.	The clients urinary pattern maintained optimum level

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
6.	Subjective Data The client complaint of weakness, tired Objective Data The clients looks weakness and tired	Activity intolerance related to fatigue and pain as evidenced by poor compliance	Client will maintain normal activities	Assess the level of activities Assist with client in activities within limit Encourage passive exercise Provide high nutritive diet as prescribed Encourage the resume daily activities gradually	Assessed the level of activities Assisted with client in activities within limit Encouraged passive exercise Provided high nutritive diet as prescribed Encouraged the resume daily activities gradually	Base line data help to plain further nursing intervention It improves client co-operative in all activities passive exercise improve health status. It promote needed energy for activities It reduces physical exertion	Client satisfied with normal activities

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
7.	Subjective Data The Client complaint of itching and irritation around the incision site Objective Data The wound looks red, tender and felt warmth around the wound.	Impaired skin integrity related to surgery as evidenced by redness, edema and warmth around the wound	The client will maintain unimpaired skin integrity	Inspect the area around the surgical incision Monitor the output from wound drain for its colour and amount. Change the dressing with aseptic technique Administer antibiotics as prescribed Monitor the signs of infection	Inspected the area around the surgical incision Monitored the output from wound drain for its colour and amount. Changed the dressing with aseptic technique Administered antibiotics as prescribed (e.g.) cifran Monitored the signs of infection	These provides baseline data about wound healing It helps in preventing complications Provide the proper environment for wound healing Prevent the growth of micro organism It helps prevents complication	Wound healed properly without complication

S. No	Assessment	Nursing diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
8.	Subjective Data Clients complaint of afraid about the health condition. Objective Data Clients Look anxious tensed, asked many question regarding health.	Fear and anxiety related healing process and recovery as evidenced report and facial grimace	The clients fear and anxiety reduce to optimum level.	Assess the level anxiety. Encourage client to talk about his /her feelings. Provide opportunity for relatives it discuses condition. Provide psychological support. Clear the doubts regarding health condition	Assessed the level anxiety. Encouraged client to talk about his / her feelings. Provided opportunity for relatives it discuses condition. Provided psychological support. Cleared the doubts regarding health condition	It helps to plan appropriate nursing intervention. It promotes successful resolution for fear and establish has effective coping mechanism. It reduces the anxiety. It reduces the anxiety. It promote knowledge about health condition	Clients fear and anxiety level was reduced

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
9.	Subjective Data Client asked how can I care me surgical area at home Objective Data The client express queries about follow up care.	Knowledge deficit related to home care management aa evidenced by verbalizing queries about follow up care	The clients will acquire knowledge about home care	Teach about importance of regular medication Encourage active exercise at home Demonstrate wound dressing Instruct about clinical signs and symptoms of infection Instruct about regular follow up care Tech about dietary intake	Taught about importance of regular medication Encouraged active exercise at home Demonstrated wound dressing Instructed about clinical signs and symptoms of infection Instructed about regular follow up care Taught about dietary intake	Promotes wound healing Enhance muscle strength and circulation it helps to wound healing Minimizes extensive complication Promotes recovery process Enhances nutrition status It help to improve the nutrition status	Client acquired knowledge about care at home

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rationale	Evaluation
10.	Objective Data The clients had surgical incision and wound drain	Risk for infection related surgical wound incision	The client will protect from infection	Monitored vital sign. Change the dressing daily with aseptic technique. Observe for redness edema and increased warmth around the surgical incision. Monitor the amount and characteristics of wound drain Administer antibiotics as prescribed Provide high caloric high protein diet.	Monitored vital sign. Changed the dressing daily with aseptic technique. Observed for redness edema and increased warmth around the surgical incision. Monitored the amount and characteristics of wound drain Administered antibiotics as prescribed (e.g.) cifran Provided high caloric high protein diet.	Vital signs provides baseline for further care. It reduces the growth of micro organism. It indicate infection and helps to reduce complication. It suppress the growth of micro organism It against infection It give more energy.	No sign of infection were observed

APPENDIX – VII

CASE ANALYSIS

Sample No. : 1

Gender : Female

Age : 43 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 23/57 (40.3%). So the client health status was improved.

Sample No. : 2

Gender : Male

Age : 62 years

Type of Surgery : Coronary artery bypass grafting surgery.

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 22/57 (38.5%). So the client health status was improved.

Sample No. : 3

Gender : Male

Age : 68 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 45/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 24/57 (42.1%). So the client health status was improved.

CASE ANALYSIS

Sample No. : 4

Gender : Female

Age : 69 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 45/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 32/57 (56.1%). So the client health status was improved.

Sample No. : 5

Gender : Male

Age : 67 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 37/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 22/57 (38.0%). So the client health status was improved.

Sample No. : 6

Gender : Male

Age : 49 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 36/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 31/57 (54.4%). So the client health status was improved.

Sample No. : 7

Gender : Female

Age : 63 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 25/57 (43.8%). So the client health status was improved.

Sample No. : 8

Gender : Male

Age : 58 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 34/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 30/57 (52.6%). So the client health status was improved.

Sample No. : 9

Gender : Male

Age : 57 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 25/57 (43.8%). So the client health status was improved.

Sample No. : 10

Gender : Female

Age : 61 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 46/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 25/57 (43.8%). So the client health status was improved.

Sample No. : 11

Gender : Male

Age : 67 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 24/57 (42.1%). So the client health status was improved.

Sample No. : 12

Gender : Female

Age : 49 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 37/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 24/57 (42.8%). So the client health status was improved.

Sample No. : 13

Gender : Female

Age : 63 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 46/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 30/57 (52.6%). So the client health status was improved.

Sample No. : 14

Gender : Male

Age : 62 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 33/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 23/57 (40%). So the client health status was improved.

Sample No. : 15

Gender : Female

Age : 57 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 45/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 21/57 (36.8%). So the client health status was improved.

Sample No. : 16

Gender : Female

Age : 63 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 35/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 25/57 (43.8%). So the client health status was improved.

Sample No. : 17

Gender : Female

Age : 68 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 33/57 (57.8%). So the client health status was improved.

Sample No. : 18

Gender : Male

Age : 57 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 35/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 22/57 (38.5%). So the client health status was improved.

Sample No. : 19

Gender : Male

Age : 48 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 45/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 34/57 (59.6%). So the client health status was improved.

Sample No. : 20

Gender : Male

Age : 53 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 23/57 (40.0%). So the client health status was improved.

Sample No. : 21

Gender : Male

Age : 54 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 22/57 (38.5%). So the client health status was improved.

Sample No. : 22

Gender : Female

Age : 57 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 25/57 (43.8%). So the client health status was improved.

Sample No. : 23

Gender : Male

Age : 59 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 45/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 30/57 (52.6%). So the client health status was improved.

Sample No. : 24

Gender : Male

Age : 58 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 36/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 25/57 (43.8%). So the client health status was improved.

Sample No. : 25

Gender : Male

Age : 65 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 45/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 21/57 (36.8%). So the client health status was improved.

Sample No. : 26

Gender : Female

Age : 54 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 20/57 (35.0%). So the client health status was improved.

Sample No. : 27

Gender : Male

Age : 58 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 33/57 (57.8%). So the client health status was improved.

Sample No. : 28

Gender : Male

Age : 58ears

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 21/57 (36.8%). So the client health status was improved.

Sample No. : 29

Gender : Male

Age : 57 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. He was scored 43/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. He scored 31/57 (54.8%). So the client health status was improved.

Sample No. : 30

Gender : Female

Age : 59 years

Type of Surgery : Coronary artery bypass grafting surgery

Nursing intervention :

The client was received after Coronary artery bypass grafting surgery. Vital signs were assessed and recorded. Oxygen saturation was monitored. She was scored 44/57 vital parameters checked every hourly. Oxygen administration given through ET tube on first operative day. Position changed 2nd hourly, IV fluids given for first, second and third postoperative day. Oral fluids started after auscultation of bowel sound on 2nd postoperative day. Intake and output chart maintained daily. On the 3rd postoperative day onwards diet was planned as prescribed viz clear fluids, liquid diets, soft bland diet was given as tolerated. Wound dressing changed daily, medication were administered as ordered. Encouraged deep breathing and leg exercises, early ambulation done. She scored 22/57 (38.5%). So the client health status was improved.