"A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST- OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA."

BY

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ABSTRACT

A pre-experimental study was undertaken **"A study to assess the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management among post-**

operative valve replacement clients at selected hospital, Secunderabad, Telangana." The study was conducted by Ms. T. Janet Shushunova, at Eashwari Bai Memorial College of Nursing, Secunderabad, in partial fulfillment of the requirement for the degree of M.Sc Nursing, Dr. NTR University of Health Sciences, Gunadala, Vijayawada, Andhra Pradesh.

Valve problems becoming a public health problem due to increasing life expectancy and new treatment methods. Patients are at risk of developing depression, anxiety or post-traumatic stress disorder after heart valve surgery and can be present at birth or caused by infections, heart attacks, or heart disease or damage. The main sign of heart valve disease is an unusual heartbeat sound called a heart murmur. A doctor can hear a heart murmur with a stethoscope. But many people have heart murmurs without having a problem. Heart tests can show if any heart valve disease. Some valve problems are minor and do not need treatment. Others might require medicine, medical procedures, or surgery to repair or replace the valve.

Regardless the surgical technique, post-surgery, co-morbidity affects quality of life and fragile patients are at risk of developing depression, anxiety or post-traumatic stress disorder. Patients can feel changed during their illness, leading to lifelong fragility. Also, at discharge and returning home the feeling of vulnerability and worries about transition phases appear, and a fear of information gap can be dominant. To better plan proper after care, describing and understanding patients' perception of recovery after heart valve replacement is essential.

OBJECTIVES

1) To assess the level of knowledge on selected aspects of home care management among post-operative valve replacement clients by pre-test knowledge scores.
2) To evaluate the effectiveness of planned teaching programme regarding selected of aspects home care management among post-operative valve replacement clients by comparing pre test and post test knowledge scores.
3) To test the significant association between the post test knowledge scores of post-operative valve replacement clients with their selected background variables.

HYPOTHESIS

H_1: There will be a significant difference in the level of knowledge on selected aspect of home care management among post-operative valve replacement clients after administration of planned teaching programme

H₂: There will be a significant association between post-test knowledge scores of post-operative valve replacement clients with their selected background variables.

METHOD

One group pre test – post test design was adopted for the present study. The structured knowledge questionnaire on home care management after valve replacement surgery at selected hospital was developed to collect the data. Pilot study was conducted on 15th to 22nd February, 2016 at care hospital on 10 samples to find out the feasibility of the study among the patients. The main study was conducted from 11th April to 25th April, 2016 at Sunshine hospital. Forty patients were selected by non – probability convenient sampling technique. The data was collected, analyzed and interpreted with the help of descriptive and inferential statistics.

RESULTS

The mean score of overall knowledge in pre-test was 18.05 +_ 6.051. The mean score of overall knowledge in post test was 31.00+_ 4.482. The obtained 't' value 12.828 is greater than the table value 2.023 and found to be highly significant at the level of p>0.05. This evidenced that the planned teaching programme was effective in increasing the level of knowledge on home care management among post-operative valve replacement clients. The obtained Chi-Square value for selected background variables age, gender, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and source of information at the level of significance of 0.05 were lower than the table value and found to be non significant except educational qualification.

CONCLUSION

Out of the 40 patients

- ♣ 80% have above average knowledge
- ♣ 20% of them have average knowledge
- ♣ 0% have below average knowledge

The present study attempted to assess the effectiveness of a planned teaching programme on selected aspects of home care management among post-operative valve replacement clients and found that most of the patients, 27(67.5%) had average knowledge in pre- test and maximum number of patients 32(80%) had above knowledge in the post-test and concluded that there was a significant improvement in the patient's knowledge in the post test after administration of the planned teaching programme. Thus, it proved that planned teaching programme is effective in improving the knowledge of the clients on selected aspects of home care management after valve replacement surgery.

CHAPTER 1

INTRODUCTION

CHAPTER I

INTRODUCTION

"One of the hardest things in life is having words in your heart that you can't utter."
- **James Earl Jones**

Life is the invisible, individual and coordinating power that cause the directing and controlling forces in the production and activity of any organism possessing individuality. And one such highly talented living being are the human beings. Human beings are capable of abstract reasoning, language, introspection and problem solving through social learning. This mental capability with an

adaptation to movements that frees the hands for manipulating objects, has allowed humans to make far greater use of tools than any other species.

Human beings are unique at utilizing systems of symbolic communication such as language and art for self-expression, the exchange of ideas and organization. Social interactions between humans have established an extremely wide variety of values, social norms and rituals, which together form the basis of human society. Thus, man is the epic being created by God in all aspects of knowledge, emotions, energy, values and intellects.

A person is said to be healthy when a person has the ability to adopt and self manage in the face of social, physical and emotional changes. Hence World Health Organization has defined health as a state of complete physical, mental and social well being and not merely an absence of disease or infirmity. If any of these dimensions are altered it may result in illness gradually leading to death.

As human beings, we have achieved a level of material progress we would not have even dreamed of barely a century ago. The marvels of modern technology have given us enormous power over the faces of nature, despite everything the ultimate result is that as days passed the happiness and life has been replaced with sorrow and vain. Mental illnesses, stress, loneliness and sickness are some of the serious problems we now face in our modern society. Diseases like cancers, respiratory diseases, kidney diseases, etc have increased on a wide toll, among all cardiac diseases are commonly most prevalent.

The heart is a muscular organ in both humans and other animals, which pumps blood through the blood vessels of the circulatory system. Blood provides the body with oxygen and nutrients, and also assists in the removal of metabolic wastes. The heart is located in the middle compartment of the mediastinum in the chest.

Commonly the right atrium and ventricle are referred together as the *right heart* and their left counterparts as the *left heart*. In a healthy heart, blood flows in one way through the heart due to heart valves, which prevent backflow.

The heart contains two atrioventricular valves, the mitral and the tricuspid and two semi lunar valves. Disease of valve may be narrowed or it may fail to close adequately and thus permit regurgitation of blood. The less precise term 'incompetence' may be used synonymously with regurgitation or reflex. The principal causes of valve diseases are congenital, acute rheumatic carditis, chronic rheumatic carditis, traumatic valve rupture, damage to chordate and papillary muscles.

FIGURE 1: REPRESENTS THE STRUCTURE OF HEART
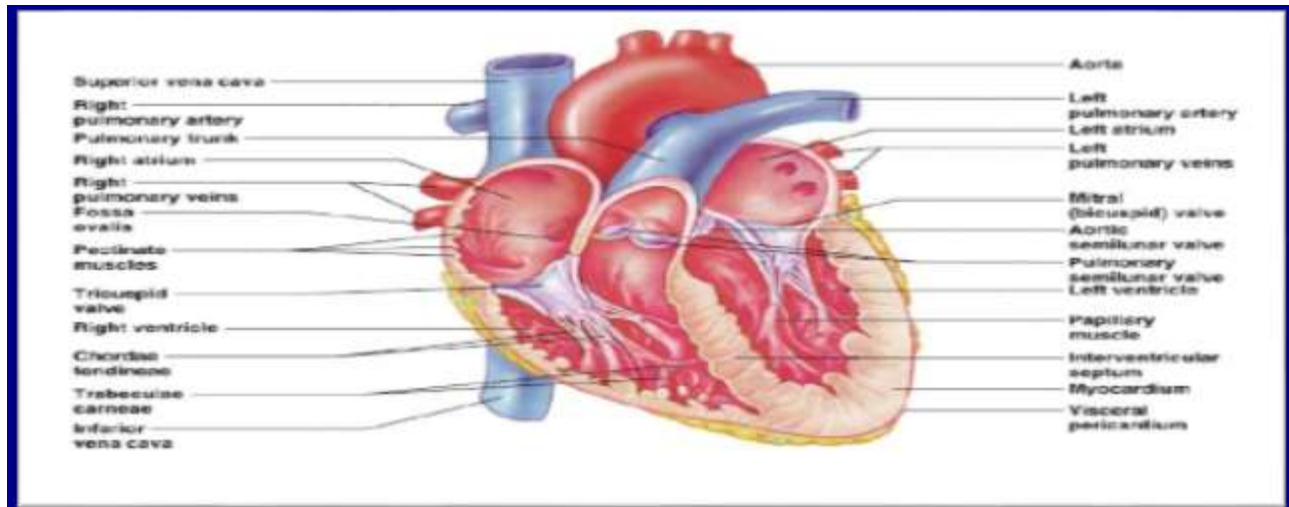
Rheumatic fever is the leading cause of acquired valvular heart disease in adults in the world. Stenosis of the mitral valve, either alone or in combination with other valvular diseases, is caused almost exclusively by rheumatic fever. Recent reports from the developing world have documented valvular heart disease incidence rates as high as 206/100 000 and valvular heart disease prevalence rates as high as 18.6/1000.

Valvular heart disease is more prevalent in underdeveloped and developing countries than in developed countries. Multiple social issues play an important role to develop valvular heart disease. Multiple social issues like poverty, low socio-economic status (SES), overcrowded dwellings, under-nutrition, poor sanitation, cultural constraints, and suboptimal medical care.

The WHO estimated that 60% of the World's cardiac patient was Indian by 2010.Recent studies show that valvular heart disease is a leading cause of morbidity and mortality in India. The prevalence of valvular heart disease is higher in urban India than in United State. On the other hand as the medical technology is advanced, there are many cardiac procedures that are being performed to maintain competent heart valves. Heart valve repair is an open heart operation. This means that the surgeon opens chest and heart to repair the defective heart valve. These surgical procedures perform to relieve angina and reduce the risk of death from valvular heart disease.

A heart patient will undergo a lot of changes in his life, for a few weeks after surgery, he will be restricted to bed rest and physical activity will be reduced. Home management is an important element of the comprehensive plan for secondary prevention of cardiovascular disease, which can reduce the age-adjusted cardiovascular mortality rate by nearly 50%. Home care management is necessary to reduce the risk factor after heart valve replacement surgery. This home care management will help the patient to return to a normal pace of life after heart valve replacement surgery.

Comprehensive home care management program which includes plenty of rest and sleep, this will help to patient heal and recover, avoid extreme temperatures i.e. very cold and very hot weather including wind chill factor and humidity, do not perform strenuous activities like lifting, pushing, pulling, mopping, vacuuming, yard work, car washing, laundry etc. Eat a well balanced, low salt, low calorie, nutritious diet comprising of fruits, vegetables, dairy and protein. Avoid alcohol and limit your caffeine intake, continue coughing and deep breathing exercises, bath or shower daily with warm water, keep incision area clean, do not apply oils, lotions or creams over incision, avoid driving or going for long outings, avoid sexual intercourse for at least 4 - 6 weeks after heart valve replacement surgery, avoid constipation, eat lots of fruits and vegetables and drink plenty of water to keep your stool soft, follow the Cardiac Rehabilitation Program as outlined by health care professional team to provide emotional support and information about the recovery process, make long term lifestyle changes like regular walking, exercising, eat low fat, low calorie diet, quit smoking etc - in short make healthy lifestyle choices.

Nurse will provide education about monitoring blood pressure, medicines, antibiotics, follow-up visit, Care for wound, Mouth care, Diet, Stay active and talk to caregivers about feelings. Nurses plays an important role for the patient who undergone valve replacement surgery regarding home care management.

NEED FOR THE STUDY

Heart diseases is the leading cause of death for both men and women in economically developed countries and in most ethnicities. The heart disease is second only to cancer. The burden of heart disease is increasing in economically developing countries as a result of population aging and growth as well as, and also due to an increasing adoption of life style choices like smoking, physical inactivity and westernized diets.

Health is a dynamic process because it is always changing. Human beings have times of good health, times of sickness and may be even times of serious illness. As their lifestyle change, so does their level of health. Humans who participate in regular physical activity do so partly to improve the current and future level of our health. Wellness is the search for enhanced life style modifications, personal growth and potential through positive life style behaviors and attitudes.

Human beings need to take responsibility for their own health and well being on a daily basis. Certain factors influence the state of wellness, including nutrition, physical activity, stress coping methods, good relationships and career success. Each day human beings work toward maximizing their level of health and wellness to live long, full and healthy lives. The pursuit of health, personal growth and

improved life relies on living a balanced life. To achieve balance, people need to care for their mind, body and spirit.

Inspite of good advancements for diagnosis and treatment, heart diseases is still a huge threat to our society. This is the second most common cardiovascular disorders for maximum deaths in the world. In industrialized countries, the prevalence of valvular heart disease is estimated at 2.5%. Because of the predominance of degenerative etiologies, the prevalence of valvular disease increases markedly after the age of 65 years, in particular with regard to aortic stenosis and mitral regurgitation, which accounts for 3 in 4 cases of valvular disease. Rheumatic heart disease still represents 22% of valvular heart disease in Europe.

The prevalence of secondary mitral regurgitation cannot be assessed reliably but it seems to be a frequent disease. The incidence of infective endocarditis is approximately 30 cases per million individiuals per year. About 610,000 people die of heart disease in the United States every year–that's 1 in every 4 deaths. Every year about 735,000 Americans have a heart attack. Of these, 525,000 are a first heart attack and 210,000 happen in people who have already had a heart attack.

Valve replacement surgery is a big event for most patients in the world. Each year, over 250,000 heart valve repair and heart valve replacement operations are performed for conditions including stenosis, regurgitation, prolapsed, bacterial infections and aneurysm.

According to the American Heart Association, about 5 million Americans are diagnosed with valvular heart disease each year. Heart disease kills 7.1 million people globally each year. Valvular heart disease prevalence from 1985 through 2002 was included. The researcher estimated that minimum of 15.6 million people in the world with valvular heart disease, with 282000 new cases each year and 233 000 resultant deaths each year.

In India, more than one billion people, will likely account for 60 per cent of heart disease patients worldwide, by 2010. According to WHO by 2015, 20 million people will die from valvular heart disease is exceptionally prevalent in the sub-Indian continent. According to WHO by 2030 almost 23.6 million people will die from heart disease and the largest increase in number of deaths will occur in the South-East Asia region.

According to European society of cardiology by 2011, heart failure was the second most prevalent predisposing condition; present in 27.6% of North Americans. Its prevalence ranged from 17.7% in India to 64.6% in Africa. The proportion of patients with heart failure associated with valvular heart disease was highest in India and Africa and lowest in Western and Eastern Europe.

A cross-sectional study was carried out in rural areas of Jawan Block, District Aligarh, Uttar Pradesh, India, covering a total population of 3760 drawn from 11 villages. The total number of confirmed cases of valvular heart disease was 24 with a prevalence rate of 6.4 per 1000 of the general rural population. The prevalence of valvular heart disease increased with age until the age of 25 years. Females were more prone to rheumatic heart disease compared to males. Socio-economic class had a direct impact on the occurrence of rheumatic heart disease.

INCIDENCE OF VALVE REPLACEMENT CASES WORLDWIDE
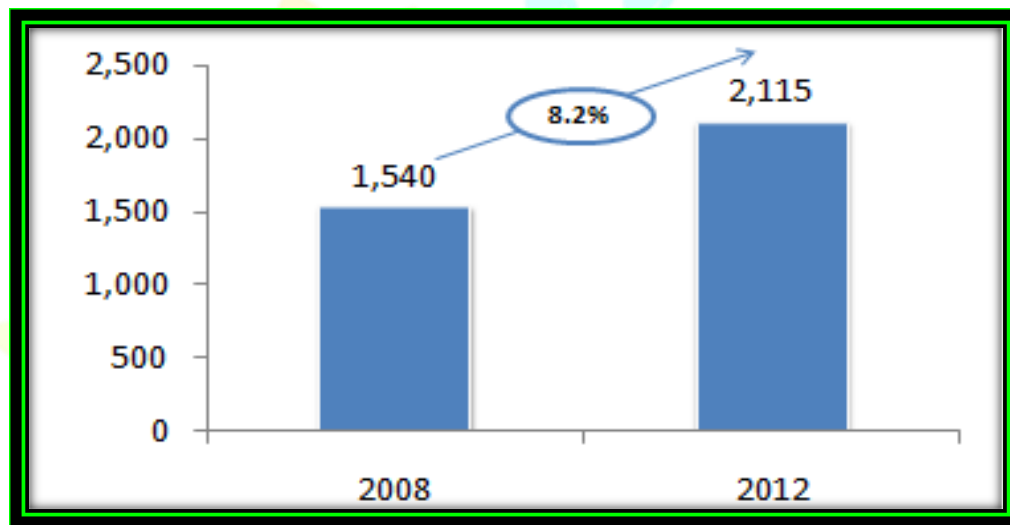
FIGURE 2: Graphical representation of heart valve replacement cases worldwide in the year 2008 and estimated valve replacement for the year 2012.

INCIDENCE OF VALVE REPLACEMENT IN INDIA
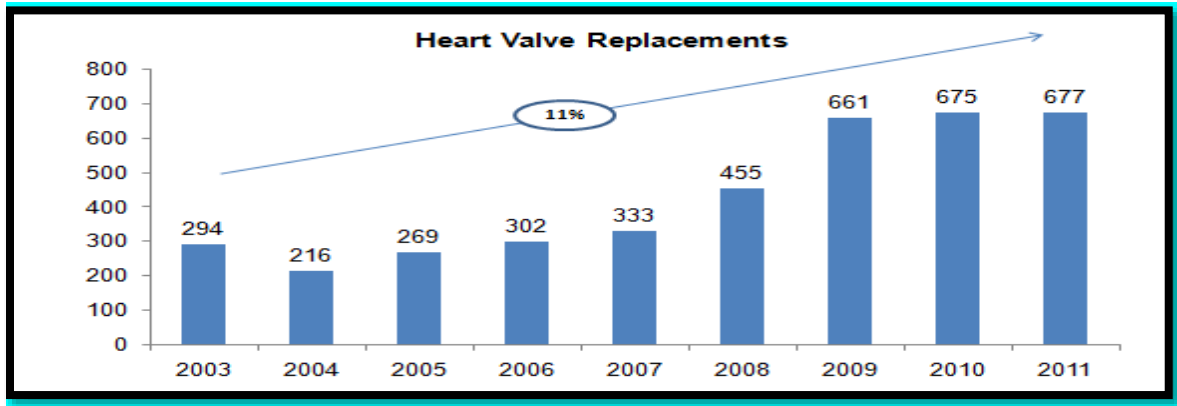
FIGURE 3: The above graph shows the incidence of heart valve replacement in which the X-axis shows the year of the incidence and Y-axis shows the total number of people affected. In 2003, 294 people underwent Heart valve Replacements. In the year 2006-2008 there was a gradual increase as 302,333,455 people respectively underwent heart valve replacements. By 2011,the heart valve replacements surgeries have been in high range from 661-677.

INCIDENCE OF VALVE REPLACEMENT IN ANDHRA PRADESH
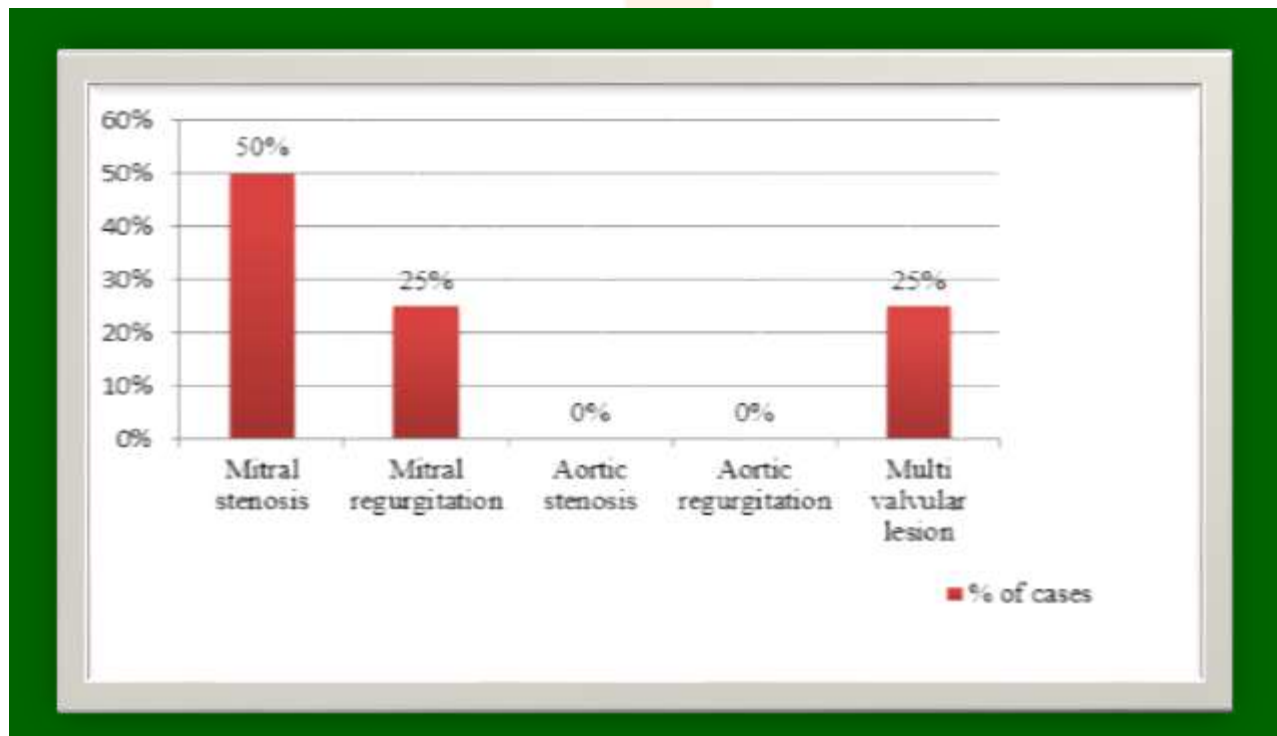
FIGURE 4: The above graph describes the census of valve replacement in Andhra Pradesh in the year 2015 ranges highest cases of mitral stenosis 50%, mitral regurgitation 25%, multi valvular lesion cases 25% and 0% of cases in aortic stenosis and aortic regurgitation.

UTILIZATION OF VARIOUS VALVE REPLACEMENT IN INDIA
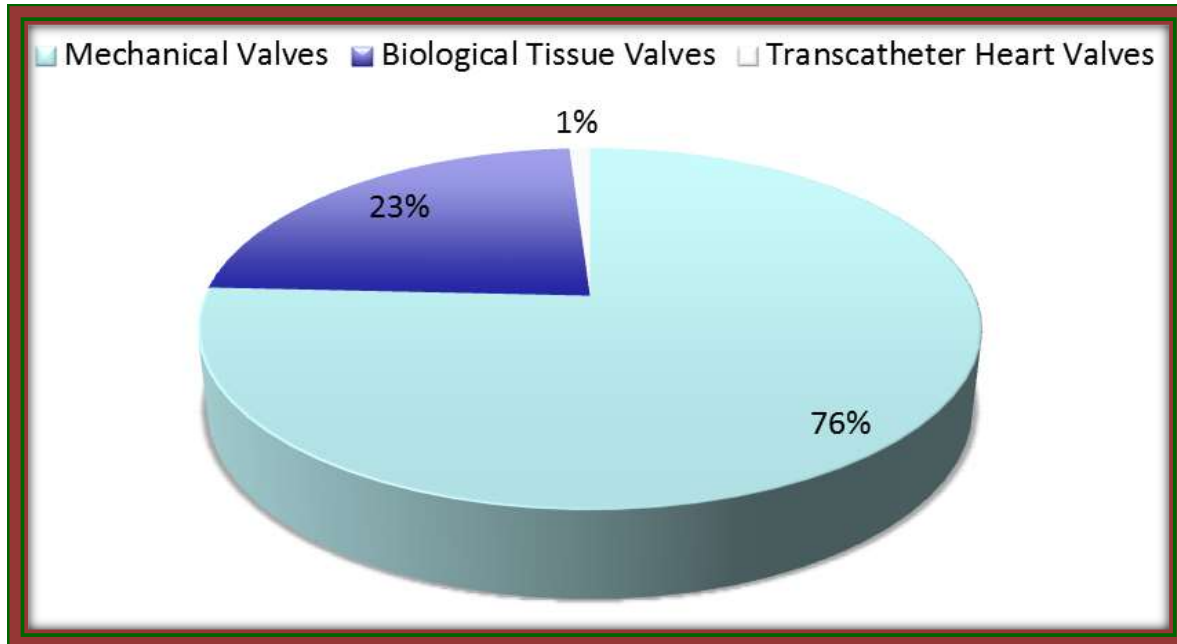
FIGURE 5: The above graph shows the incidence of valve replacement utilized for various types of valve surgeries. The maximum usage of mechanical valves is 76%, biological tissue valve is 23% and least usage is the transcather heart valve is 1%.

COST OF THE VALVE REPLACEMENT IN INDIA

Category	General Ward	Special Ward	Deluxe Ward
SJIC Rates	INR 70,000	INR 110,000	INR 125,000
	+ cost of the valve		
CGHS /Insurance /State / Central Govt /Boards / Banks. Corporations /ESIC / Any Govt undertaking.	INR 113,000	144,900	Not Applicable
	+ cost of the valve		

TABLE 1: Above figure shows cost of the valves in different categories i.e., in SJIC rates, the general ward cost Rs.70,000, special ward cost Rs. 110,000 and deluxe ward cost Rs. 125,000 and in other category of any government/banks/state/central government, the general ward cost Rs. 113,000, special ward cost Rs. 144,900 and deluxe ward not applicable

COST OF VALVE REPLACEMENT IN DIFFERENT COUNTRIES

Procedure	Country					
	Costa Rica	Mexico	Thailand	Singapore	India	USA
Heart Valve Replacement	18,000	21,500	11,500	15,500	12,000	170,00
Angioplasty	16,500	16,500	14,500	14,500	10,500	61,500
Heart Bypass	26,500	26,500	13,000	22,500	11,000	127,000

TABLE 2: Above figure shows the cost of valve replacement, angioplasty and heart bypass varies in different countries, whereas in India it costs about Rs. 12,000 for heart valve replacement, Rs. 10,500 for angioplasty and Rs. 11,000 for heart bypass.

LOCATION OF MAJOR HOSPITALS IN INDIA PERFORMING VALVE REPLACEMENT SURGERIES

Narayana Hrudayalaya	Apollo Hospitals	Fortis Healthcare	Wockhardt Hospitals
Bangalore	Ahmedabad	Amritsar	Bhavnagar
Dharwad	Aragonda	Bangalore	Goa
Hyderabad	Bangalore	Chennai	Mumbai
Jaipur	Bhubaneshwar	Dehradun	Nagpur
Jamshedpur	Bilaspur	Faridabad	Nashik
Kolar	Chennai	Gurgaon	Rajkot
Kolkata	Delhi	Jaipur	Surat
	Hyderabad	Kangra	
	Kakinada	Kolkata	
	Kolkata	Kottayam	
	Madurai	Mohali	
	Mysore	Moradabad	
	Noida	Mumbai	
	Pune	New Delhi	
	Vishakapatnam	Noida	
		Raipur	

TABLE 3: Above table shows the major hospitals located in India are Narayana Hrudayalaya, Apollo Hospitals, Forts Health Care and Wockhardt hospital with its different branches in performing valve replacement surgeries.

PREVALENCE OF DEATH RATES IN 2014

Heart Disease Deaths by Type in Males
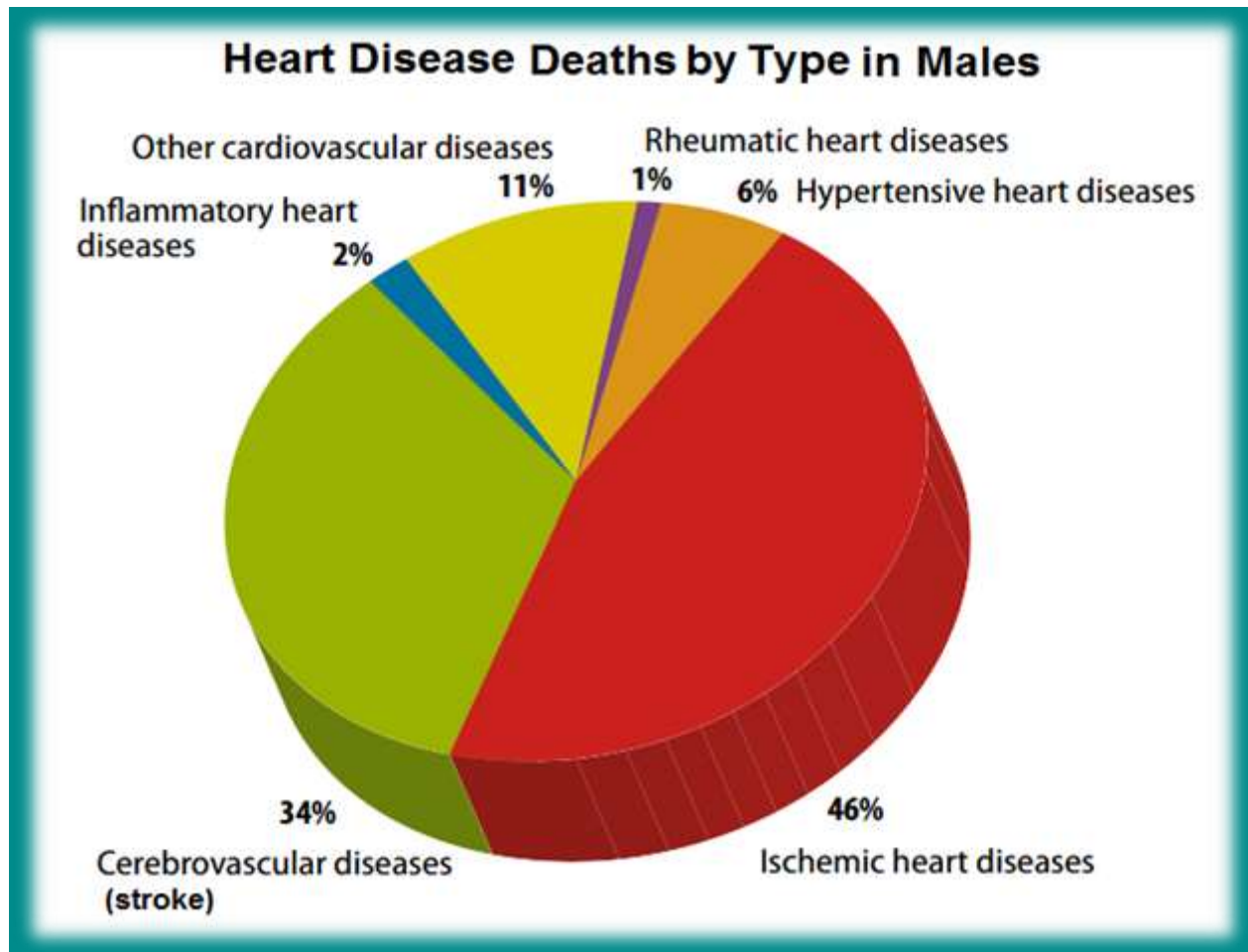
FIGURE 6: Above figure shows the death rates of various types of heart diseases in the year 2014, which is more in occurrence of males. So the percentage calculated are as follows: cardiovascular disease 11%, inflammatory heart disease 2%, rheumatic heart diseases 1%, hypertensive heart diseases 6%, ischemic heart diseases 46% and cerebrovascular accident(stroke) 34%.

India is a country with the highest number of young heart patients. Indians are genetically three times more susceptible than Europeans to have an attack on the heart. In India in the past five decades, rates of valvular heart disease among urban populations have risen from 4 % to 11 %.

Home care services are an effective and safe intervention. These services are undoubtedly an essential component of the contemporary treatment of patients with multiple presentations of heart failure. The advantage of the home management program is that in increases the functional ability of the person, changes the natural history of cardiac disease and reduces morbidity and mortality.

Therefore, as the heart valve replacement surgeries are increased day by day, the researcher during her clinical experience observed that the clients lack knowledge in home care management. Hence the investigator decided to develop a structured teaching programme regarding knowledge on home care management and assess the impact on health and assess the effectiveness of planned teaching programme in improving the knowledge of home care management and its impact on health among valve replacement clients.

PROBLEM STATEMENT

"A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA."

OBJECTIVES

- ♣ To assess the level of knowledge on selected aspects of home care management among post-operative valve replacement clients by pre-test knowledge scores.
- ♣ To evaluate the effectiveness of planned teaching programme regarding selected aspects of home care management among post-operative valve replacement clients by comparing pre test and post test knowledge scores.
- ♣ To test the significant association between the post test knowledge scores of post-operative valve replacement clients with their selected background variables.

OPERATIONAL DEFINITIONS

ASSESS: In this study, it refers to the collection of information from post-operative valve replacement clients with the help of structured knowledge questionnaire.

EFFECTIVENESS: In this study, it refers to the significant gain in knowledge scores among post-operative valve replacement clients regarding home care management after planned teaching programme which is determined by the difference between pre-test and post-test knowledge scores.

PLANNED TEACHING PROGRAMME: In this study, it refers to an organized and systemic group teaching strategy to impart knowledge regarding significant aspects of home care management of post-operative valve replacement clients which includes general information such as exercise, stress reduction technique, healthy dietary pattern, rest, sexual activity, quit smoking, alcohol and do's and

dont's after heart valve surgery which is planned and executed by the investigator for the purpose of the study.

KNOWLEDGE: In this study, it refers to the correct response from the subjects regarding home care management as elicited through a structured knowledge questionnaire by the investigator for the purpose of the study.

HOME CARE MANAGEMENT: In this study, it refers to strategies which involves exercise programme, stress reduction techniques, healthy dietary pattern, rest, avoidance of sexual activity, quit smoking and alcohol and do's and don'ts carried out after heart valve replacement.

POST-OPERATIVE VALVE REPLACEMENT CLIENTS: In this study, it refers to the clients who were diagnosed with valvular diseases and who underwent valve replacement surgery at selected hospital.

CONCEPTUAL FRAMEWORK

A concept is a cognitive unit of meaning an abstract idea or a mental symbol sometimes defined as a" unit of knowledge", built from other units which act as a concept's characteristics. Conceptualization is a process of forming ideas, which utilized and forms conceptual framework for development of research design. A conceptual framework is a conceptual model refers to concepts that offer a framework of proposition for conducting research. **Polit & Hungler (2004)** defines that conceptual framework is inter related concepts or abstractions that are assembled together in some rational scheme be their relevance to a common theme. Conceptual frame work is a group of concepts and set of proportions that spell the relationship between them. Conceptual frame work place several inter related roles in the progress of science.

The present study aimed at evaluating the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management among post-operative valve replacement clients at selected hospital. The modified conceptual framework is developed by the investigator based on **IMOGENE KING'S GOAL ATTAINMENT THEORY.** This theory focus on the inter - personal relationship between the client and the investigator. The interaction is influenced by the perception and leads to mutual goal setting which are to be achieved by the investigator and the client. In the present study interaction takes place between the investigator and the post-operative valve replacement clients.

In the present study clients after valve replacement surgery at selected cardiac hospital and research investigator come together and involve in a "Collaborative Process" which consists of perception, action, communication, interaction and transaction.

PERCEPTION: Perception is "Each person's representation of reality" the elements of perception are importing of energy from the environment and organizing it by information, transforming energy, processing information and exporting information in the form of behaviors".

In this study investigator perceives the need to improve the knowledge regarding home care management for post-operative valve replacement clients. And the clients perceive the need to learn about home management after valve replacement surgery.

ACTION: Action is "the physical and mental activity to achieve the goal what the individual perceive". The investigator prepares the structured knowledge questionnaire and planned teaching programme on home care management after valve replacement surgery. Clients action – clients act by giving consent to participate in the study.

COMMUNICATION: Communication is "A process whereby information is given from one person to another either directly or indirectly. Communication is the information component of the interactions". Here, the investigator communicates by administering structured knowledge questionnaire and planned teaching programme on home care management among post-operative valve replacement clients.

INTERACTION: Interaction is defined as "A process of perception and communication between person and environment and between person to person, represented by verbal and non – verbal behaviors that are goal directed". In this study the investigator administered the structured knowledge questionnaire to assess the knowledge and administering the planned teaching programme (PTP) on home care management for post-operative valve replacement clients. And the clients respond to structured knowledge questionnaire and participate in the study. The investigator and the post-operative valve replacement clients are interacting with each other for attainment of the specified goal.

TRANSACTIONS: Transaction is defined as "Observable behaviors of human beings interacting with their environment." When transactions occur between investigator and post-operative valve replacement clients, goals are attained. In this study, there is acquisition of knowledge among post-operative valve replacement clients in terms of increased knowledge scores on home care management.

FIGURE 7: MODIFIED CONCEPTUAL FRAME WORK ADOPTING KING'SIMOGENE GOAL ATTAINMENT THERORY

PERCEPTION
Perceives assessment of learning needs of post-operative valve replacement clients regarding home care management

ACTION
-Preparation of structured knowledge questionnaire to assess the knowledge of post-operative valve replacement clients regarding home care management
-Preparation of planned teaching programme on home care management

COMMUNICATION
INVESTIGATOR
Administration of structured knowledge questionnaire by pre-test
Administration of PTP on home care management after valve replacement surgery

Conduct Post test

TRANSACTION
GOAL
ATTAINMENT
Acquisition of knowledge among clients in terms of increased knowledge scores on home management after valve replacement surgery

Investigator

Clients

Mutual goal setting of investigator and client to learn regarding home care management

Interaction

PERCEPTION
Perceives lack of knowledge regarding home care management

ACTION
Clients are motivated to gain knowledge regarding home care management among post-operative valve replacement clients
Consent was taken to participate in the study

COMMUNICATION
Clients respond to structured knowledge questionnaire and they participate and understand PTP on home care management after valve replacement

Below Average

Above Average

Average

Feedback (Pre-test)

HYPOTHESIS:

H₁: There will be a significant difference in the level of knowledge on selected aspect of home care management among post-operative valve replacement clients after administration of planned teaching programme

H₂: There will be a significant association between post-test knowledge scores of post-operative valve replacement clients with their selected background variables.

ASSUMPTIONS

It is assumed that:

1. Clients undergone heart valve replacements surgery may have some basic knowledge regarding home care management.
2. Clients will be willing to participate in the study
3. Clients will respond truthfully and answers frankly to the questions
4. Planned teaching programme is an accepted teaching strategy aimed at improving knowledge of post-operative valve replacement clients regarding home care management.

DELIMITATIONS

The study is delimited to:

1. Sample size of 40 post-operative valve replacement clients at selected hospital, Secunderabad.
2. Evaluation of pre-test and post-test scores in terms of knowledge only.
3. Period of data collection one week.

OUTCOME

Outcome of conceptual frame of this study reveals that complications of valve replacement is severity of problems in terms of the mild problems, moderate problems and severe problems and life style practices influence is present on the post-operative valve replacement clients.

EPILOGUE

This chapter deals with the description of introduction of the study, need for the study, statement of the problem, objectives, operational definitions, conceptual frame work, research hypothesis, assumptions and delimitations.

CHAPTER - II

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

The purpose of review of literature is the identification, selection, critical analysis and reporting of existing information on the problem chosen for the study.

Review of literature helps to know what is already known that is these helps in developing a broad conceptual content into which the research problem will fit in. Main goal is to develop a sound knowledge in development of nursing theory, education, practice and research.

Review of literature for the present study is organized under the following headings.

SECTION-I: Review of literature regarding incidence of valve replacement surgeries.

SECTION-II: Review of literature regarding effectiveness of home care management after heart valve replacement**.**

Section-III: Review of literature regarding effects of medication after valve replacement surgery.

Section-IV: Review of literature regarding effectiveness of planned teaching programme on home care management among post-operative valve replacement clients.

SECTION- I: Review of literature regarding incidence of valve replacement surgeries.

Laila Hellgren, Elisabeth Stahle, (2004) experimental study was conducted at Department of Cardiothoracic Surgery, University Hospital, Sweden from 1998 to 2003. A sample size of 225 clients who underwent primary heart valve surgery were selected, who required 8 days or more of treatment in an intensive care unit with Nottingham health profile and SF-36 scale were analyzed. A cohort group (n =154) matched for sex, age, type of procedure, and week of operation, with an uncomplicated postoperative course (ICU stay of 2 days or less) served as the control group. The study revealed a 5 year Survivor in the total ICU group was 68%,this group showed quality of life by lesser physical mobility after heart valve surgery compared with controls group and 80% patients experienced improvement after surgery in terms of quality of life.

Farinas MC et al (2006) conducted a case-control study on risk factors of prosthetic valve endocarditis .The investigator conducted the study to assess risk factors of

prosthetic valve endocarditis related to patients, peri prosthetic events, and postoperative events, and postoperative complications. They have done a retrospective case control study in a tertiary care hospital in Spain from January 1986 to January 1998. Cases were patients with "definite" and "possible" infective endocarditis defined according to the "Durack criteria". Controls were patients undergoing prosthetic valve replacement who at the time of the study had not developed infective endocarditis. There were 81 cases and 162 controls. In the multivariate analysis, risk factors significantly associated with prosthetic valve endocarditis. Patients with prosthetic valve endocarditis differ from people without infective endocarditis with regard to intrinsic and post operative risk factors but not regarding perioperative-related variables.

Rathors KS. Kumar P, Jadhav U, Tendolkar AG, et al. (2008) study was done to provide insight into improving morbidity and mortality in these patients in rheumatic mitral. The retrospective study included 105 patients aged 5 years one more 75 underwent mechanical valve replacement and 30 received a bioprosthetic valve. Mean age was 58.52 ±2 years. Immediate preoperative mortality included five patient (4.76%) and long term mortality included three patient (3%). 35 patients previously underwent closed and open commissurotomy and balloon valvotomy. Actuarial survival at 4 and 6 years of follow up was 94.24% and 88.52% respectively. With improving life expectancy and early interventions, the number of < or = 50 years old rheumatic valvular disease patients is increasing. The present study showed a marked improvement for this subset of patients, although age still remains the main risk factor along with atrial fibrillation repeat surgery stroke and tricuspid valve disease

Emma Lagercrantz, Dan Lindblom, Ulrik Sartipy. (2010) conducted by doctors in Karolinska University Hospital, Sweden in order to assess the quality of life and the mortality rate after the heart surgery. The study included 4,086 cardiac surgery patients and identified 141patients who had a postoperative intensive care unit stay of more than 10 days with the Karnofsky performance scale and the Short Form-36 questionnaires cale .The data regarding patient's outcome were collected. The study results concluded that early mortality was 33%. They found significantly lower physical (39.7 %) and mental (44.1 %) scores, especially in patients who required dialysis. However, long-term survival and functional status were encouraging according to the Quality of life.

Laksman ZW, Silversides CK, Sedlak T, Samman AM, Williams WG, Webb GD et al (2011) conducted a cross-sectional study was to assess the prevalence of valvular aortic stenosis require valve replacement among 121 adults with sub aortic stenosis. Sample size was 23% had bicuspid valves and 21% had coarctation of the aorta. 79% of one surgical resection of sub arctic tissue (median age 12 years). Moderate to severe aortic regurgitation was present in 16% of patients, 26% of patients required surgery for valvular aortic stenosis. Valve surgery for aortic stenosis was more common in patients with concomitant bicuspid aortic valve disease (p = 0.008), coarctation of the aorta , and supra valvular stenosis. The researcher concluded that Valvular aortic stenosis is a surprisingly common finding in patients with discrete sub aortic stenosis. So follow up care is necessary to monitor aortic valve status continues to be warranted even after a successful surgical resection.

Shaikh AH, Hanif B, Hasan K, Adil A, Hashmani S, Raza M et al (2011) conducted a retrospective study on prevalence of coronary artery disease in patients undergone valve replacement surgery among of 144 patients at the Tabba Heart Institute between January 2006 to December 2008.The sample size were 74 (51.4%) males and 70 (48.6%) females, mean age was 51.64 +/- 11 years.73 (50.7%) underwent mitral valve replacement, 47 (32.6%) had aortic and 24 (16.7%) had dual valve replacement. Out of 144 patients, 99 (68.8%) had < 50% coronary stenosis and remaining 45 (31.3%) had > or = 50% mitral stenosis. The researcher concluded that there is a high prevalence of coronary artery disease in patients, undergoing valve replacement surgery.

Joziasse IC, Vink A, Cramer MJ, van Oosterhout MF, van Herwerden LA, Heijmen R et al. (2011) conducted a study on prevalence of Bicuspid aortic valve which is one of the most common congenital heart defects. Study was conducted among 80 patients whom 32(40%) were diagnosed with BAV with severe aortic stenosis necessitating aortic valve replacement surgery. MRI was performed in 33% of patients to assess valve morphology. The researcher concluded that there was high prevalence of patients with BAV with severe aortic valve stenosis.

Faggiano, Frattini S, Zilioli V, Rossi A, Nistri S, Dini FL et al. (2011) conducted a cohort study on prevalence of valve replacement surgery among 240 patients. The result shows that mean age was 78.6±8.93years, 75.5% was ≥75years old, 60% females. 226 patients (94.2%) had symptoms, valve area <1cm (2) was detected in 81.6%

of patients, 77 (32%) underwent surgical AVR, 64 (26.7%) underwent trans catheter valve implantation, 28 (11.6%) underwent balloon valvuloplasty. The researcher concluded that valve replacement is very common in US.

Edwards MB, Taylor KM, et al. (2012) conducted to determine the risk factor hospital death in patients following mitral valve replacement after surgical intervention. Approximately 15,000 heart, valve are implanted annually worldwide. Mean age at operation was 58.7 years. Follow up was 96.1% complete with a total of 342,993 patients per years. Mortality (30- day) fell from 6.9% to 3.8% but increased to 6.7% in the two years. Actuarial survival at 1.5 and 10 years was 89.5%, 78.5% and 61.8% respectively.

Khandbar S. et al. (2009) conducted on high-risk mitral valve replacement in severe pulmonary hypertension among 382 patients underwent mitral valve replacement. Objective of the study was to review the early and late results in this high risk subgroup. Results of the study shown that compared with routine elective mitral valve replacement with a mortality rate of 3.6%, early mortality is high. Also the study shown that mitral valve replacement in severe pulmonary hypertension has higher complication rates.

KE Hammer meister,WG Hendersons, CM Burchfiel, et al. (2010) conducted in 365 patients comparison on the incidence of complication according to type of valve surgery, concludes that valve surgery patient are suffering from largest amount of post operative complication than any other surgery, the study identified following postoperative complication in different type of valve model. Bjork shiley (model) tilting disc0.6±0.1 thrombosis, 1.7% embolism, 1.2±0.2% bleeding, 0.1% infection endocarditis and paravalvula leak 0.7± 0.1%.Medtronic hall (model) tilting disc 1.1 ± 0.3 % thrombosis,3.1±0.5% embolism,0.5±0.2% bleeding and paravalvutor leak 0.7 ± 0.2 %. Chitra (model) tilting disc 1.6 ± 0.5% thrombosis, 2.4± 0.6 % embolism, 0.4 ± 0.2 % bleeding, 0.5+0.3 % infection endocarditic and paravalvular 0%.St Jude medical(model) bileaflet 0% thrombosis ,3.4 % embolism, 1.6% bleeding, 0.3% infection endocarditis and Carbomedics (model) bileaflet 0.4% thrombosis, 0.9 % embolism, 0.4% bleeding, 0.5% infection endocardiatis and paravalural 0.9%.

Sujatha Kesavan (2010) conducted on risk profile and outcomes of aortic valve replacement in 273 octogenarian that underwent aortic valve replacement. The aim of

the study to include the patient, relationship. The result showed logistic Euro score (LES) was collected to characterize the predicated operative risk. Two groups were defined LES ≥ 15(n-80) and Les < (n-193) in pts with LES ≥ 15, 30d mortality was (14%) (95% cl; 7%-23%) compared with 4% (95%cl: 2%-8%) In the LES < 15 group   (P< 0.007) despite the increase in number of operation from 1996 to 2008, the average LES did not change, only 5% of patients had prior bypass surgery the LES identified a Low risk qualities of patient with very low mortality (4%,n-8, p<0.007) at 36d.. The low risk group had an excellent outcome and the high risk had a poor outcome after surgical aortic valve replacement. It may be the treatment with transcatheter aortic valve implantation.

Johnnitre et al (2000) conducted a combined Doppler/catheter study on rest and exercise hemodynamics before and after valve replacement. The investigator conducted a combined catheter/Doppler study; rest and exercise hemodynamics were evaluated in 23 patients following aortic or mitral valve replacement and compared with preoperative findings. Postoperative evaluation was done at rest and during exercise. With exercise; there was a significant rise in cardiac output in both groups. There was a significant rise in the gradients across the valve prosthesis in both groups, showing a significant correlation between the gradient at rest and exercise. Both hemodynamic abnormalities seem not to be determined by obstruction to flow across the valve prosthesis and may be concealed, showing nearly normal values at rest but a pathologic response to physical stress.

Fitz Patricks M A et al (2002) conducted a retrospective review of all 190 patients living in Canterbury who had heart valve surgery between January 1981 and December 1986 to determine the incidence of endocarditis and complications of anticoagulation. There were 35 late deaths, of which 9 were attributed to thromboembolism (3), major bleeding (2) or endocarditis (4). 2 episodes of endocarditis occurred after minor dental procedures performed without antibiotic prophylaxis. Some patient 17 had inadequate recall of important details of anticoagulant control of endocarditis prophylaxis. Only 24% know their late PT, yet a survey of general practitioners revealed that, in their view, the majority of patients might capable of monitoring their own anticoagulant therapy. The complications could be reduced by better patient education possibly enhanced by greater involvement of the patient in their anticoagulant control. The indications for antibiotic prophylaxis for dental procedures should be broadened for this group of patients.

Saket Agarwal, et al. (2009) conducted to compare outcomes after mitral valve replacement with a mechanical versus a bioprosthetic valve. Almost 250 patients under gone mitral valve replacement .Out of 250 patients received mechanical valve and 115 patients were implanted with a bioprosthetic valve. Follow up for a mean period of 3 years. The incidences of valve thrombosis was higher in mechanical valve as compared to bioprothetic valve (6% versus 0.9%).Similarly there was a higher incidence of thromboembolism in mechanical valves as compared to bioprosthetic valves (4.5% versus 0%).Bleeding complication occurred more frequently in mechanical then bioprothetic valve (6% versus 0.9%) and endocardiatis (2.2% versus2.7%) survival at three years (96.2% versus 97.2%) in the two groups.

Section–II: Review of literature regarding effectiveness of home care management after valve replacement.

Soliman Hamad MA, Van Eckerlan E, Van Agt I. (2006) conducted various retrospective studies suggest that patients self management of oral anticoagulants leads to improved control. In a particular randomized study effects of self management in the control of anticoagulant therapy and quality of life VERSUS investigated. This study shown that the improvement in the quality of life scores in patients discharged after year was significant higher in the self management group regards to the physical component.

Randal J. Thomas, Marjorie King, Karen Lui, Neil Oldridge, et al. (2007) the American college of Cardiology and American heart association grouped a guideline committee for administering guideline to the health professionals regarding the importance of life style modifications after the cardiac surgery on the basis of various studies and statistics. In the committee they include patients with heart valve surgical repair or replacement for prime aspects of consideration. The Writing Committee focused its attention on two general performance measurement sets: Referral of eligible patients to an outpatient Cardiac rehabilitation (CR) program, and delivery of appropriate CR services by CR programs. The committee recommends that the guideline should be implemented in the health care delivery system.

Edward .Winslow, Nancy. Bohannon, Stephen A (2011) several articles were published online regarding the need for the life style changes after the valve replacement surgery. It was evident that sedentary life style changes such as food,

activities pattern[19],reducing cigarette smoking, weight control, dietary recommendations, rest and Sexual activities adjustment which improved the quality of life after the surgery.

Goldsmith IR, Lip GY, Patel RL, (2001) conducted a prospective study to determine changes of patients' quality of life (QOL) after aortic valve replacement among 62 patients in UK. The result shows that significant improvement in all eight QOL parameters that is physical function; role limitation due to physical function; social function ; role limitation due to emotional problems; energy; mental health; pain; and general health perception. The researcher concluded that there was significant improvement in patients QOL at three months after aortic valve replacement.

Couris R et al (2006) conducted a study on dietary vitamin K variability affects INR coagulation indices. The investigators was conducted a prospective study on 60 outpatients with a mean age 60.3, who began oral Warfarin anticoagulant therapy within 14 days prior to their first clinic visit to an outpatient anticoagulation clinic. Fourty three patients completed the study and seventeen dropped out. Pearson's correlation coefficient revealed the variability in INR changes in vitamin K intake was inversely correlated. Multiple regression analysis indicated that a weekly change of 714-mug dietary vitamin K significantly altered weekly INR by 1 unit after adjustment for age, weight, sex, height, and concominant use of medication known to interact with warfarin. Patient taking warfarin and consuming markedly changing amount of vitamin K may have a variable weekly INR with potentially unstable anticoagulant outcomes.

Lapier T K. (2007) conducted a study on early introduction of daily living activities and improves quality of life among mitral valve replacement patients. This study shown that the quality of life in patients who where introduces to early activities of daily living shown better life quality improvement one year after discharged as comparing those who did not.

Nilsson U, (2009) conducted a randomized controlled trial was to determine the effect of bed rest with music after valve replacement surgery to decrease stress level among 60 patients. Stress response was assessed by determining the serum cortisol, heart rate, respiratory rate and subjective pain and anxiety levels. The sample was 30 in experimental group and other 30 in control group. Data were collected using the s-cortisol levels between the groups; 484. 4 mmol/L in the music group versus 618.8 mmol/L

in the control group . At the end of study the researcher concluded that bed rest with music will reduce the stress after valve replacement surgery.

Celinski R, Graywa-Celimska A. (2009) conducted to determine if ratings of difficulty on pain were more likely to detect deficits in activities of daily living (ADL) than degree of dependency and to longitudinally examine ADL in patients recovering from mitral valve replacement surgery. This study included 40 patients who had recently undergone mitral valve replacement surgery. Activities of daily living performance using 3 subcategories of the functional status index: mobility, personal care and hand activities. Assessments of activities of daily living abilities that rely only on need for assistance may underestimate the presence of functional deficits in recovering from mitral valve replacement surgery.

Macchi et al. (2009) conducted to test the 1 year adherence to the physical exercise instruction received at the time of discharge in elderly patient who have undergone by using a questionnaire an mitral valve replacement physical activity and the 6 minutes walk test. It was found that 65% of the elderly patients who have attended structured teaching programme at the time of discharged, shown significant increased in physical activities scores base on the questionnaire administered to them.

Milani RV, Lavic CJ. (2009) conducted on reducing psychosocial stress by improving survival from exercises. Exercises training shown that it reduces mortality in patient with mitral valve surgery. Mortality was approximately 4- fold greater in patients with high psychosocial stress than in those with low psychosocial stress [22% VERSUS 5%] exercise training decreased the prevalence of psychosocial stress from 10% to 4%.Psychosocial stress is an independent risk factor for mortality in patient with above condition and exercise training can effectively reduce its prevalence. Exercise training reduce mortality n patient with mitral valve replacement surgery and this effect seems to be medicated in part because of the salutary effects of exercise on psychosocial stress.

Racca V, Castiglioni P, Ripamonti V, Bertoli S, Calvo MG, Ferratini M, (2010) conducted an experimental study to determine nutrition support is an important aspect on recovery after elective heart surgery among 50 nondiabetic patients. Plasma concentrations of nutrition biomarkers were measured after mitral and/or aortic valve replacement and again 16 days later. The result was low plasma albumin level

increased, anemia improved, and high levels of inflammation markers decline after 16 days. Vitamins remained stable within normal values, with the exception of vitamin B12, which decreased significantly from 516 +/- 341 to 445 +/- 212 mg/mL . The researcher concluded that Vitamin B12 supplementation should be encouraged because of its substantial reduction during the home care management period

Nel E,Uys HH (**1993)** explained the effect of pre-operative teaching on the emotional attitude of patients undergoing valve replacement surgery. This study suggests that the life style functioning of the patients can be improved by means of a pre-operative rehabilitative educational programme by the professional nurse. A quasi-experimental study was performed on 4 groups -2 experimental groups and 2 control groups to determine the effect of the structured pre-operative educational programme on the following three factors: satisfaction with self, others and life; safe-guarding hope and anticipation of a future. An analysis of the date indicated a significant difference between the groups that followed the programme and groups that did not follow the programme. The primary recommendation of the study is that all patients in the process of undergoing valve replacement surgery should follow a pre-operative educational programme. This programme has a positive influence on the life-style functioning of the patient and will thus promote the process of rehabilitation.

Joyee K keithley. (1998) conducted an early introduction of daily living activities has many advantages to reduce postoperative complications and to facilitate early recovery from surgical illness. Postoperative complications like chest pain, pneumonia, and incision infection, difficulty in breath, fatigue and activity of daily living can be managed by early introduction of daily living activities. Early postoperative activities and exercise can significantly reduce the risk of thromboembolism as well as improve ventilation and brighter patient's outlook.

Booth SI et al. (1999) conducted a study on dietary vitamin K and Warfarin interaction. It is widely assumed that a dietary vitaminK-Warfarin interaction exists. While dark, green leafy vegetables are primary source of dietary vitamin K; these foods are not commonly consumed as a daily basis in the United States. Based on food analysis studies on vitamin K, it is now known that dietary vitamin K is found in certain plant oils, such as backed, margarines, and salad dressings. There are sufficient data to suggest that

a constant dietary intake of vitamin K that meets current dietary recommendations of 65-80 mg/day is the most acceptable practice for patients on Warfarin therapy.

Andrades C. (2001) evaluative study was conducted to assess the knowledge of patients and their significant others who had undergone valve related surgery. Data was collected using a semi structured interview before and after the planned discharge teaching. During pre-test patients showed good awareness about disease condition and diet, whereas, caregivers earned good score in surgical wound care but regarding the complications both had only poor knowledge. Also both samples are well aware about medication in both study and control group. Followed by the planned discharge teaching improvement in knowledge regarding all the mentioned fields can be seen among study group. The study concluded that planned discharge teaching is an effective method and nurses have a key role in the teaching process.

Philippe Meurin, Marie Christine Iliou, Ahmed Ben Driss, Bernard Pierre, Sonia Corone, Pascal Cristofini et al. (2005) conducted a prospective study to evaluate safety and feasibility of an early exercise training programme after mitral valve repair. 2051consecutive patients (male gender, 70%; mean age, 59 ± 14 years) were included 16 ± 10 days after mitral valve repair. The result showed that left ventricular ejection fraction slightly increased. The researcher concluded that exercise teaching programme is important after mitral valve repair.

Nygren J, Hansel J. (2005) study of postoperative position changing and early self care activities, it is shows that, early self care activities and position at changing is essential for prevention of lung complications, thrombophlebitis and early discharge from hospital. Recently the time for leaving bed becomes early and activities because possible within two days in postoperative stage. Through the early self care activities it is possible to prevent pulmonary embolism.

Steffeninog. et al. (2005) an American college of Cardiology and American heart association grouped a guideline committee for administering guideline to the health professionals regarding the importance of life style modifications after the cardiac surgery on the basis of various studies and statistics. In the committee they include patients with heart valve surgical repair or replacement for prime aspects of consideration. It was evident that sedentary life style changes such as food, activities pattern, reducing cigarette smoking, weight

control, dietary recommendations, rest and Sexual activities adjustment which improved the quality of life after the surgery.

Section-III: Review of literature regarding effects of medication after valve replacement surgery.

Bharat et al (2003) conducted a study on reduction of mechanical heart valve thrombosis through a clinical audit. The investigators done a systematic analysis under-anticoagulation in most patients, in a hospital in Eastern India.Thrombosis risk in 80 patients on regular follow up from 1989 to 1997 was 8.68 per 100 patient years (pt-yr). The incidence of both thrombotic and bleeding complications was reported as less than two per 1 00 pt-yr, when prothrombin time was consistently in the range of INR 2.5 to 3.9. In targeting this low event rate were identified. International Normalized Ratio (INR) was introduced to report prothrombin time (PT). The impact of the remedial measures was studied in 81 patients over a tota-l of 254 pt-yr of follow up, from 1998 to 2001. Thrombosis risk was reduced from 8.68 to 5.12 per 100 pt-yr, while non-fatal bleeding events increased from 0.28 to 1.96 per 100 pt-yr. Due to early recognition of occlusive prosthetic valve thrombosis and institution of fibrinolytic therapy, fatal events were reduced from 3.8 per 100 pt-yr to none for four consecutive years. The clinical audit proved to be a valuable tool for understanding the problems in health care delivery, and bringing about improvement.

Ambrosetti M, Ageno W, Calori A, Ferrarese S, Barosi A, Marchetti P et al. (2009) conducted an experimental study among 81 patient to evaluate the time in therapeutic range in heart valve surgery patients receiving oral anticoagulation therapy in home. The result shows that warfarin dosages were significantly higher from day 1 to day 7 than from day 8 to day 15. At day 7, only 25% of patients showed a therapeutic INR value. Inadequate anticoagulation between postoperative day 8 and 15 was displayed in 41 (51%) patients with hypertension as the only independent predictor. The researcher concluded that half of patients have non therapeutic INR values in the first two weeks after heart valve surgery while on warfarin. So patient education is important for anti-coagulation management after discharge.

Hu A, Chow CM, Dao D, Errett L, Keith M. (2006) conducted to determine the influence of both in-hospital teaching practices as well as socioeconomic status and demographic variables on patients' knowledge of warfarin therapy. Study was conducted among 100 patients 3 to 6 months after mechanical heart valve replacement. A

previously validated 20-item questionnaire was used to measure the patient's knowledge of warfarin, its side effects, and vitamin K food sources. Demographic information, socioeconomic status data, and medical education information were also collected. The result shows that 61% of participants had scores indicative of insufficient knowledge of warfarin therapy (score <=80%). Age was negatively related to warfarin knowledge scores (r = 0.27, P = .007). Patients with family incomes greater than $25,000, who had greater than a grade 8 education, and who were employed or self-employed had significantly higher warfarin knowledge scores (P = .007, P = .002, and P = .001, respectively). Before surgery was not related to warfarin knowledge scores. Furthermore, none of the in-hospital teaching practices significantly influenced improved knowledge scores (P = .001). The researcher concluded that post discharge education program improved warfarin knowledge scores to the patient after valve replacement surgery.

Sheffers J M, Schuikers. (2006) department of surgery, university of Virginia health system USA conducted a study regarding surgical care improvement and used quality improvement measures. The surgical care improvement project (SCIP) developed out of the STP project and its process measures. The result showed seven of the SCIP initiatives apply to the peri-operative period and prophylactic antibiotics should be received within 1 hour prior to surgical incision, be selected for activity against the most probable antimicrobial contaminants and be discontinued within 24 h after the surgery end-time . Study concluded there is strong evidence that implementation of protocols that standardize practices reduce the risk of surgical infection.

Fang et al. (2006) conducted a study on health literacy and anti-coagulation related outcomes among patients taking Warfarin. Little known about whether health literacy affects anticoagulation-related outcomes. The investigator conducted a survey on patient taking warfarin through an anticoagulant clinic. They asked patients to answer questions related to their Warfarin therapy and used multivariable logistic regression to assess whether health literacy was associated with incorrect answers. They also assessed whether health literacy was associated with non adherence to Warfarin as well as time in theraputic INR range. The result of the study was limited health literacy was associated with incorrect answers to questions on Warfarin's mechanism, side effects, medication interaction and frequency of monitoring, after adjusting for age, sex, race/ethnicity education, cognitive impairment and years on Warfarin. Limited health

literacy is associated with deficits in Warfarin-related knowledge but not with self reported adherence to Warfarin or INR control. Effort should concentrate on investigating alternative means of educating patients on the management and potential risks of anticoagulation.

Wong et al(2003) conducted a study on use of herbal medicines by patients receiving Warfarin. The observational study was conducted to estimate the magnitude of use of herbal medicines among Chinese patients attending the Warfarin clinic of the Princes of Wales Hospital in Hong Kong. The investigator conducted an interview by a medical officer for all patients who attended the Warfarin clinic during May 2001. Patients were asked about the use of herbal medicines in the preceding week. Demographic data, indication and duration of Warfarin therapy and INR value at the time of the visit were also noted. One hundred and seven patient were interviewed, 28 claimed to have taken herbal medicines during the week prior to the clinical visit. The users of herbal medicines had lower INR value than nonusers, possibly because of a lower warfarin dosage and because a smaller proportion of such patients had heart valve replacement. None of the patients in this study showed any evidence of thrombo-embolism or bleeding on the day of visit. Among the Chinese patients treated with warfarin at a Hong Kong clinic; the use of herbal medicines was relatively common. Health care professional plays an important role in educating the patients and updating the list of herbal medicines that should be avoided by patients taking warfarin.

SECTION – IV: Review of literature regarding effectiveness of planned teaching programme on home care management among post-operative valve replacement clients.

Linde BJ, Janz NM. (2000) conducted to assess the effectiveness of structured teaching programme on patient knowledge and compliance of Quality of Life among 30 patients who had underwent valve replacement surgery and 18 patients who had had coronary artery bypass surgery were included in this study. Among them 25 patients were taught by masters-prepared clinical specialists and 23 by nurses with less than master's preparation. Measurements of knowledge and compliance were obtained preoperatively. The study revealed that the patients who are received teaching from masters-prepared nurses had significantly higher test scores at discharge than the teaching received by nurses with less than master's degree. So there is an effectiveness of teaching

programme by the nurses with masters in degree regarding Quality of life after valve replacement surgery.

Linde BJ, Janz NM, (2000) conducted a study to assess the effect of a comprehensive teaching program on patient knowledge and compliance among 30 patients who had valve replacement surgery. 25 of these patients were taught by masters-prepared clinical specialists and 23 by nurses with less than masters preparation. Measurements of knowledge and compliance were obtained preoperatively, at discharge, and during the first two postoperative visits. Compliance percentages were significantly higher than those reported for cardiac patients in a previous study. Patients taught by masters-prepared nurses had significantly higher test scores at discharge than did patient taught by nurses with less than masters preparation. So there is an effectiveness of teaching programme for the patient to improve knowledge after valve replacement surgery.

P. Akhila. (2007) pre-experimental study conducted in Chennai to assess the effectiveness of structured teaching programme on cardiac rehabilitation among patients with first time myocardial infarction at Apollo Hospital. Data was collected by using a self-administered questionnaire. The pre-test done on the 3rd day of admission and the post-test conducted on the 7th day followed by a structured teaching plan. The study showed a drastic change in the knowledge level of patients from 63.33% of people had inadequate knowledge to same percent of adequate knowledge. Followed by the teaching programme everyone acquired a moderate to adequate.

A study was conducted to assess the effectiveness of Self Instructional Module on patient knowledge and compliance of Quality of Life among 60 patients who had underwent valve replacement surgery included in this study. Among them 25 patients were taught by masters-prepared clinical specialists and 23 by nurses with less than master's preparation. The study revealed that the patients who are received teaching from masters-prepared nurses had significantly higher test scores at discharge than the teaching received by nurses with less than master's degree. So there is an effectiveness of teaching programme by the nurses with masters in degree regarding Quality of life after valve replacement surgery.

Suaja J A, Stason W B, Ades P A, Normand S H. (2009) conduced to assessed the effects of structured teaching programme on survival in a large cohort of older patients who have under gone cardiac surgery. It was found one-to-5 year mortality

rate were users in structured teaching programme where less than in non users. Mortality rates were 21% to 34% lower in users than nonusers in this socio economically and clinically diverse, older population after extensive analyses.

EPILOGUE:

The chapter deals with review of literature. It was useful to select and justify the statement of the problem and developed conceptual frame work select the tool and to compare the findings of the present study with those of the earlier researchers.
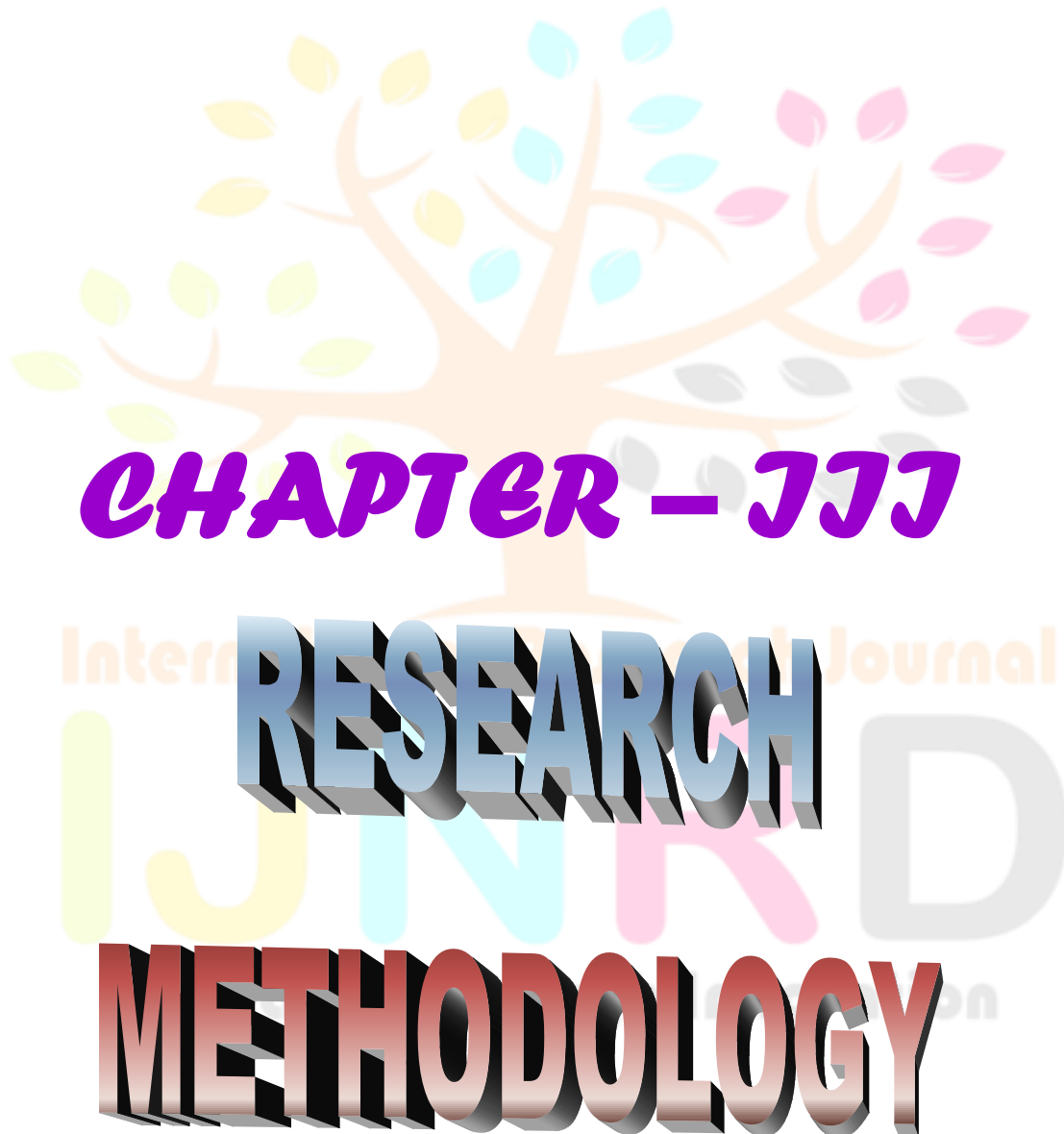
CHAPTER – III

RESEARCH

METHODOLOGY

CHAPTER III

RESEARCH METHODOLOGY

MATERIALS AND METHODS

Research methodology is a systematic way to solve a problem **(Polit & Beck 1996).** It is a science of study in which how research to be carried out. It is a set of methods and principles used to perform a particular activity. The researcher must carefully select the research design as it has an important role in conducting the study. The research design determines how the study is to be organized, when data is to be collected and when interventions are to be implemented.

Methodology is the systematic, theoretical analysis of the methods applied to a field of study or the theoretical analysis of the body of methods and principles associated with a branch of knowledge. The process used to collect information and data for the purpose of making business decisions. The methodology may include publication interviews, surveys and other research techniques and could include both present and historical information.

It is considered as the backbone or structure of the study. It involves the systematic procedure, by which the investigator starts from the initial identifications of the problem to its final conclusion. It is signs of study how research is done scientifically. Hence the details of methodology includes the rationale for the choice of the research approach, research design, setting of the study, variables population, sample, sample characteristics, inclusion and exclusion criteria, data collection tool, description of the tool, blue print, content validity, reliability, pilot study, data collection procedure, plan for data analysis and ethical considerations.

RESEARCH APPROACH

In the present study the "Evaluative approach" was used to "assess the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management of patients after valve replacement surgery in selected hospital, Secunderabad, Telangana."

RESEARCH DESIGN

The research design is concerned with the overall frame work for conducting the study. Pre- experimental study with one group pre test – post test design was adopted for the present study.

O_1 X O_2

Pre - test	→	Planned Teaching Programme	→	Post – test

TARGET POPULATION
Post-operative clients with valve replacement

↓

ACCESSIBLE POPULATION
Post-operative clients with valve replacement admitted at Sunshine Hospital, Secunderabad, Telangana

BACKGROUND VARIABLES

- **Age**
- **Gender**
- **Educational status**
- **Occupational status**
- **Monthly family income**
- **Type of family**
- **Marital status**
- **Family history of valvular heart diseases**
- **Personal habits**

Sample and Sample Size is 40

SAMPLING TECHNIQUE
Non Probability Convenient Sampling

Pre- test

Administered planned teaching programme on home care management after valve replacement

DATA COLLECTION
Structured knowledge questionnaire

Post- test

ANALYSIS AND INTERPRETATION
Inferential and Descriptive Analysis

CRITERION MEASURES
Knowledge scores

FINDINGS

REPORT THESIS

FIGURE 8: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN RESEARCH SETTING

Based on the availability of the sample the present study was conducted at Sunshine Hospital, Secunderabad, Telangana.

RESEARCH VARIABLES

Variable is an attribute of a person or object that varies, which is taken on different values.

Independent Variable: In this study the planned teaching programme regarding the home care management after valve replacement surgery is the independent variable.

Dependent Variable: The knowledge of the post-operative valve replacement clients at the selected hospital is the dependent variable in this study.

Background Variable: The back ground variables are age, gender, educational status, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and personal habits.

POPULATION

Population is the entire aggregation of cases that meet a designed set of criteria **(Polit & Hungler, 1999)**. The population is again divided into two types. They are target and accessible population.

Target Population: It refers to the elements, people, objects to which the investigator wants to generalize the research findings. In the present study the target population of the study was the clients who underwent valve replacement surgery.

Accessible Population: Accessible population refers to the aggregate of cases which confirm to the designed criteria and which is accessible to the researcher as a pool of subjects or objects. In this study the population consists of post-operative valve replacement clients at selected cardiac hospital at Secunderabad, Telangana.

SAMPLE AND SAMPLE SIZE

SAMPLE SIZE

The sample will be post-operative valve replacement clients in selected cardiac hospital at Secunderabad and the sample size is 40..

SAMPLING TECHNIQUE

The sampling technique is the Non – Probability Convenient Sampling.

CRITERIA FOR SELECTING THE SAMPLE

Inclusion Criteria:

- Post-operative valve replacement clients at selected cardiac hospital, Secunderabad
- Clients who are willing to participate in the study.

- Clients who are able to understand and read English and Telugu.
- Clients who are present during the period of data collection.

Exclusion Criteria:

- Clients who are suffering from any other critical illnesses.
- Clients who are health professionals.

DEVELOPMENT OF THE TOOL

After an extensive review of literature, discussion with the experts and the investigators personal experience the structured knowledge questionnaire on home care management after valve replacement surgery was developed. The first draft of the tool consisted of 50 items and then based on the pre – testing, suggestions from experts, modifications and re– arrangements of few items were done. Thus, the final tool consisted of 40 items.

DESCRIPTION OF THE TOOL

In the present study the tool consisted of two parts: Part – A and Part – B

Part-A: Consisted of selected background variables such as age, gender, educational status, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and source of information regarding home care management after valve replacement surgery

Part-B: Consisted of 40 items related to **(1)** General knowledge regarding valvular heart disease **(2)** Home care management after valve replacement surgery through personal hygiene, diet, exercises, weight and strain, drug therapy, cardiac rehabilitation and follow up.

SCORING KEY

Scoring key was prepared for part – A by coding the background variables. For part – B, score "1" was awarded for the correct response and "0" for wrong response in all items. Thus a total 40 score were allotted under knowledge aspect.

DEVELOPMENT OF PLANNED TEACHING PROGRAMME

The planned teaching programme was developed based on the objectives of knowledge variables. The first draft of the planned teaching programme was developed and was given to experts along with objectives and rating scale. Based on their suggestions and recommendations (i.e., concising, changing and adding of the content, simplifying some of the terms), the final draft content was prepared.

The title of the programme is **"Planned teaching programme on knowledge regarding selected aspects of home care management among post-operative valve replacement clients".**

The planned teaching programme consisted of objectives and content (introduction, anatomy and physiology of heart, structure, functions, definition, risk factors, procedures, valve replacement, precautions, home care management, follow up and immediate visit to hospital) key answers and references.

CONTENT VALIDITY

The structured knowledge questionnaire and planned teaching programme were given to 8 experts: 6 experts from the field of nursing, one statistician and one cardiologist in order to obtain validity. Based on their suggestions and recommendations the tool and the planned teaching programme was modified i.e., concise and comprehend some of the terms. Thus the final draft of tool consists of 40 knowledge items.

RELIABILITY

The reliability of the tool was tested by using Split half technique on a sample of 10 post-operative valve replacement clients. The Karl Pearson Co – efficient Correlation 'r' was computed by deviation method along with Spearman's Brown Correlation.

The following formula were used in the computation of "r" value:

1. **Deviation Method**
2. **Karl Pearson formula**

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}$$

3. **Sperman Brown's Prophecy formula**

$$r = \frac{2r}{1 + r}$$

r = reliability co-efficient

n = number of subjects

X = Pre – test knowledge score

Y = Post – test knowledge score

The 'r' value obtained is 0.98 and the tool was found to be reliable.

PILOT STUDY

A pilot study is a small scale version designed to test the methods to be used in a larger study, which is sometimes referred to as the Parent study **(Polit & Beck, 2008).** The purpose of this study was to assess the practicability, feasibility and appropriateness of the statistical analysis of data. For the pilot study the investigator choose Care hospital Nampally as the place of study.

Formal permission was obtained from the concerned authorities i.e., the Director and Nursing Superintendent to conduct the pilot study. The investigator has given self introduction to the subjects and explained the purpose of data collection to them and then taken the subjects willingness to participate in the study. The subjects were assured the anonymity and confidentiality of the information provided by them. The pilot study was conducted from 15th February, 2016 to 22nd February, 2016 by using non – probability convenient sampling technique. Then the structured knowledge questionnaire was administered individually to the 10 subjects on 15th February, 2016 (pre – test). The planned teaching programme was also given on the same day. On 22nd February, 2016 (post – test) was conducted by using the same structured knowledge questionnaire.

The analysis of the study is given as a grading score as Above average, Average and Below average for a total of 40. Scoring was given for a score greater than 66.6% as above average, 33.3 – 63.6% as average and less than 33.3% as below average. Out of the 10 subjects, the grading is given than 2 clients have above average, 4 have average knowledge and 4 others have below average knowledge. Data analysis was done using descriptive and inferential statistics. The study was found to be feasible and practicable. The significance of difference between the pre – test and the post – test was found by

paired "t" test. The obtained "t" value (5.71), at 0.05 level of significance was found to be significant. Thus, the pilot study did not show any flaws in the research design.

ETHICAL ISSUES

The study objectives and the data collection procedures were approved by the research and ethical committees of the institution. The pilot and main study were conducted after obtaining the approval from the authorities of respective colleges. The purpose and other details of the study were explained to the study participants. Informed consent was obtained from the study subjects. Assurance was given to the study subjects about the anonymity and the confidentiality of the data collected from them. Thus, the ethical issues were insured in the study.

DATA COLLECTION PROCEDURE

Data collection means information that is systematically collected during the course of the research study. It is the gathering of information needed to address research problem. A formal permission was obtained from the selected setting. Data was collected from 11th April, 2016 to 25th April, 2016 at Sunshine Hospital, Secunderabad. Data was collected from 40 samples who were divided into two groups consisting of 20 clients in each group by using non – probability convenient sampling technique. The clients were requested to be assembled at conference hall.

Thereafter, the investigator gave self introduction, explained the purpose of data collection to the subjects and subjects willingness to participate in the study was ascertained. The subjects were assured the anonymity and confidentiality of the information provided by them. Structured knowledge questionnaire was administered to the selected subjects with the required information and the planned teaching programme was given on the same day. On the seventh day, post – test was conducted by using the same structured knowledge questionnaire.

PLAN FOR DATA ANALYSIS

Data collection is the systemic organization and synthesis of research data and testing research hypothesis by using obtained data. It was planned to analyze and interpret data with the help of descriptive and inferential statistics. The data was edited, coded and

entered in Excel sheet, using SPSS version 20 and the probability of less than 0.05 was considered statistically significant.

The data analysis was organized under the following sections. Background variables of valve replacement surgery clients were analyzed using frequency and percentage distribution. Home care management after valve replacement surgery clients was analyzed using mean, mean percentage, standard and the paired "t" test to find the significance of difference between the selected variables and the pre – test post - test knowledge scores. Chi – Square test to determine association between post – test knowledge scores and selected background variables. The significant findings are expressed in the form of tables, figures and graphs.

EPILOGUE

This chapter dealt with the description of research approach, research design, variables, setting of the study, population, sample and sample size, sampling technique, criteria for the sample selection, development and description of the tool, scoring, content validity, reliability, pilot study, ethical issues, procedure for data collection and plan for data analysis.

CHAPTER - IV

ANALYSIS AND

INTERPRETATION

CHAPTER – IV

ANALYSIS AND INTERPRETATION

Analysis is defined as categorizing, ordering, manipulating and summarizing of data to reduce it to intelligible and interpretable form so that the research problem can be studied and tested including relationship between the variables **(Polit &Hungler)**.

It involves a search for the broader meaning and implications of the statistical findings. The result of the analysis need to be interpreted with due consideration of the overall aims of the project, its theoretical framework, the specific hypothesis being tested, the existing body of related research knowledge and the limitation of the adopted research methods.

This chapter deals with the analysis and interpretation of data obtained from 40 valve replacement patients using a structured teaching questionnaire to assess the knowledge on home care management after valve replacement surgery before and after the administration of a planned teaching programme.

Descriptive and inferential statistics were used to analyze the collected data to meet the objectives of the study and to test the hypotheses.

The data findings have organized and finalized according to the plan for data analysis and are presented under the following sections.

OBJECTIVES

1) To assess the level of knowledge on selected aspects of home care management among post-operative valve replacement clients by pre-test knowledge scores.

2) To evaluate the effectiveness of planned teaching programme regarding selected aspects of home care management among post-operative valve replacement clients by comparing pre test and post test knowledge scores.

3) To test the significant association between the post test knowledge scores of post-operative valve replacement clients with their selected background variables.

ORGANIZATION OF DATA

The collected data was edited, tabulated, analyzed and interpreted accordingly. The findings obtained were presented in the form of tables diagrams as follows:

Section – I: Background variables of post-operative valve replacement clients

Section – II: Knowledge of post-operative valve replacement clients on home care management in pre – test

Section – III: Knowledge of post-operative valve replacement clients on home care management in post – test

Section – IV: Comparison of pre – test and post – test knowledge scores on home care management of post-operative valve replacement clients

Section – V: Association between the background variables and post – test knowledge scores on home care management of post-operative valve replacement clients

SECTION – I

BACKGROUND VARIABLES OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS

In research study it is very important to know the demographic variables of the study restricted to the particular study only. Background variables included in this study are: age, gender, educational status, occupational status, monthly family income, type of family, marital status, family history of valvular heart disease and source of personal habits.

TABLE – 4

FREQUENCY AND PERCENTAGE DISTRIBUTION OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS ACCORDING TO SELECTED BACKGROUND VARIABLES

(N = 40)

BACKGROUND VARIABLES	FREQUENCY	PERCENTAGE
Age		
30 – 39 years	8	20.0
40 – 49 years	8	20.0
50 – 59 years	14	35.0

60 years and above	10	25.0
Gender		
Male	24	60.0
Female	16	40.0
Education Qualification		
Primary school	17	42.5
High school	5	12.5
Intermediate	4	10.0
Graduate and above	14	35.0
Occupational Status		
Employed	16	40.0
Unemployed	12	30.0
Business	5	12.5
Retired	7	17.5
Monthly Family Income		
5000 – 7000 Rs/month	16	40.0
8000 – 10, 000 Rs/ month	5	12.5
11,000 – 13,000 Rs/month	4	10.0
14,000 – 17,000 Rs/month	15	37.5
Type of Family		
Nuclear family	20	50.0
Joint family	17	42.5
Extended family	3	7.5
Blended family	0	0
Marital Status		

Married	38	95.0
Unmarried	2	5.0
Any other	0	0
Family History of Valvular Heart Disease		
Yes	14	35.0
No	26	65.0
Personal Habits		
Alcohol consumption	9	22.5
Smoking	14	35.0
Tobacco chewing	0	0
None	17	42.5

The above table indicates that the majority of the subjects 14 (35.0%) belong to the age group of 50 – 59 years, 8 subjects (20.0%) belong to the age group of 40 – 49 years, 8(20.0%) subjects belong to the age group of 30 – 39 years and 10(25.0%) subjects belong to the age group of 60 years and above. Majority of the subjects 24(60.0%) were males and 16 (40.0%) were females. Highest number of subjects were 17(42.5%) primary education, 14(35.0%) from graduates and above, 5(12.5%) subjects with higher education and 4(10.0%) from intermediate. Maximum number of subjects 16(40.0%) were employees, 12(30.0%) were unemployees, 7(17.5%) were retired and 5(12.5%) were in business. Majority of the subjects 16(40.0%) have an monthly family income 5000 – 7000 rs/month, 15(37.5%) subjects have a monthly of 14,000 – 17,000 rs/month, 5(12.5%) have 8000 – 10,000 rs/month and 4(10.0%) have 11,000 – 13,000 rs/month. Maximum number of subjects 20(50.0%) were from nuclear family, 17(42.5%) from joint family, 3(7.5%) came from extended family and there were no subjects from blended family. Majority of the subjects 38(95.0%) were married, 2(5.0%) subjects were unmarried and there were no subjects in any other. Maximum number of subjects 26(65.0%) had no family history of valvular disease whereas 14(35.0%) had a family history of valvular diseases. And related to personal habits, majority of the subjects 17(42.5%) had none of the habits, 14(35.0%)

had smoking habits, 9(22.5%) had habit of alcohol consumption and there were no subjects in tobacco chewing.

FIGURE – 9

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR AGE
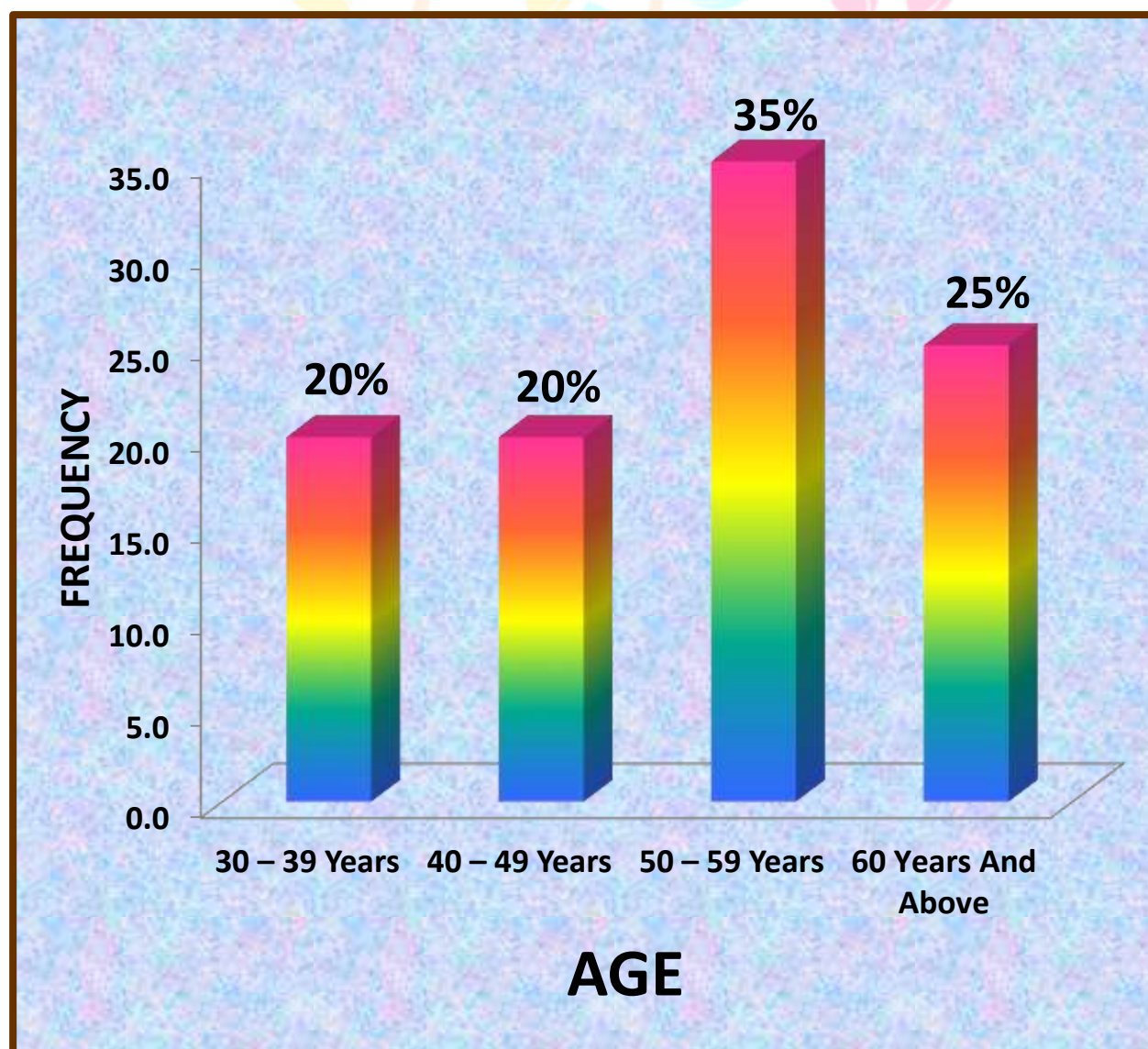
The above graph shows out of 40 post-operative valve replacement clients, 14(35%) were between 50-59 years, 10(25%) were between 60 years and above, 8(20%) were between 40-49 years and 8(20%) were between 30-39 years of age.

FIGURE – 10

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR GENDER
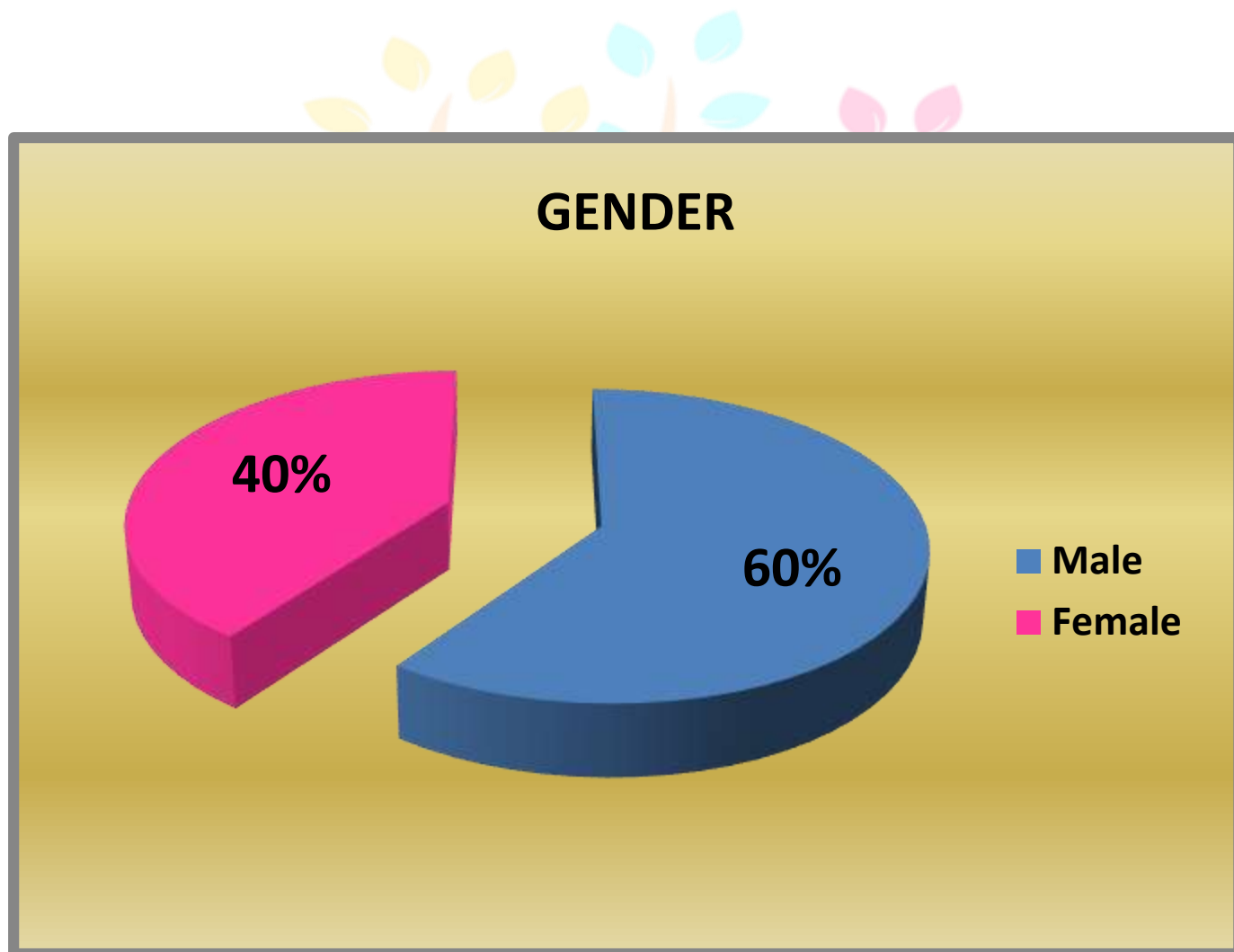
The above graph shows that majority of post-operative valve replacement clients are men 24(60%) and only 16(40%) are women.

FIGURE – 11

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR EDUCATION
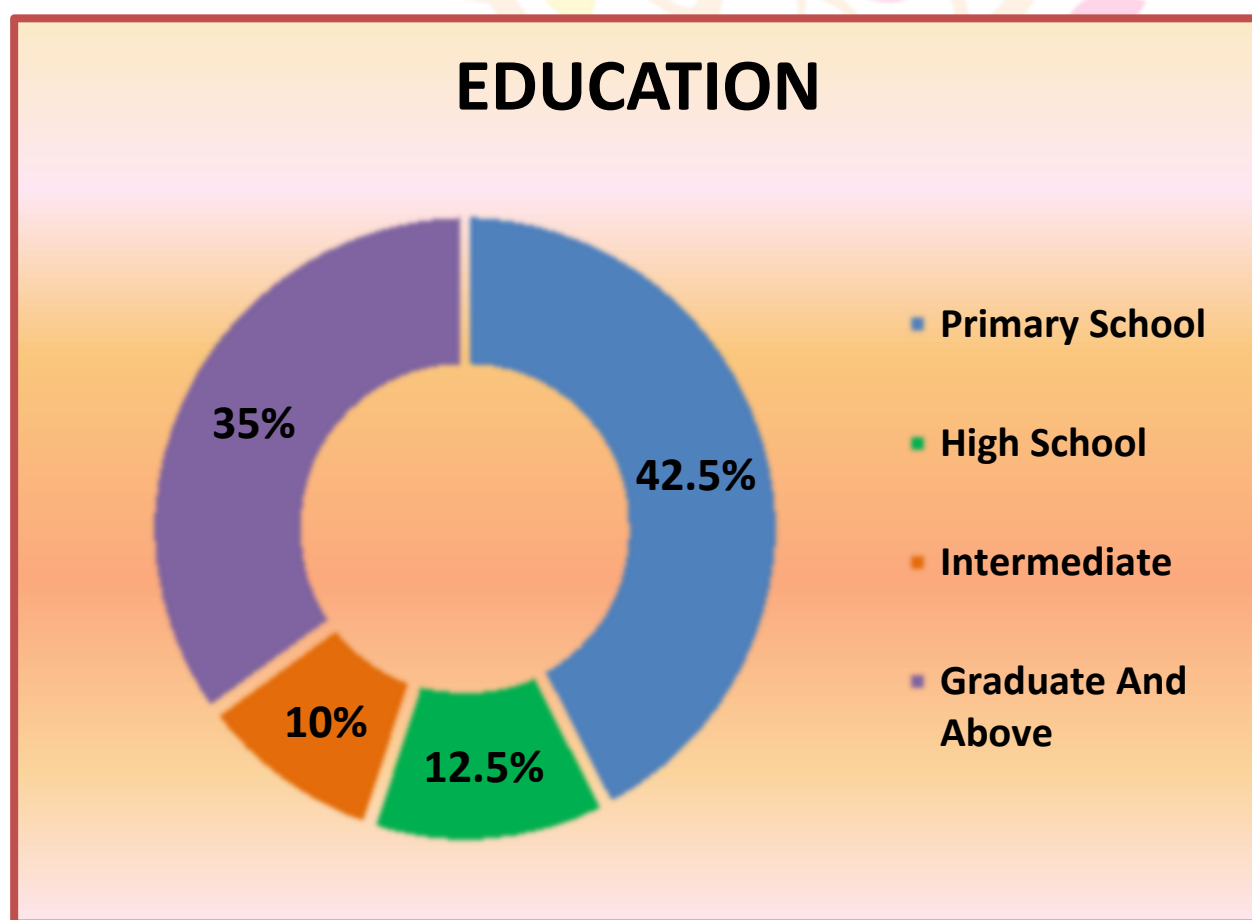
The above figure shows that majority of post-operative valve replacement clients are 17(42.5%) primary school, 14(35%) are graduates and above, 5(12.5%) are high school and only 4(10%) are intermediate level.

FIGURE – 12

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR OCCUPATION
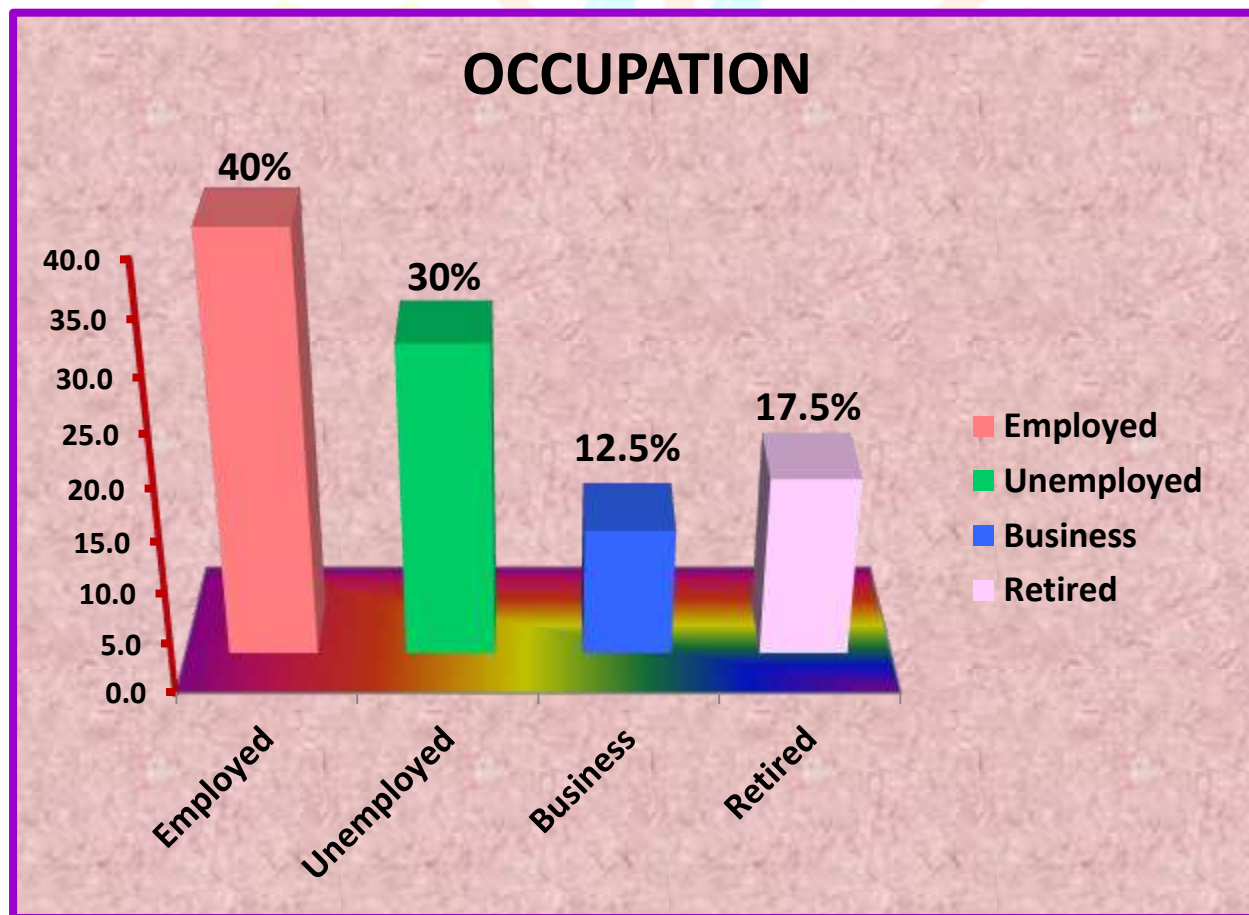
The above figure shows majority of post-operative valve replacement clients are 16(40%) are employed, 12(30%) are unemployed, 7(17.5%) are retired and only 5(12.5%) are business.

FIGURE – 13

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR MONTHLY FAMILY INCOME

MONTHLY FAMILY INCOME

- 5000 – 7000 Rs/Month
- 8000 – 10,000 Rs/Month
- 11,000– 13,000 Rs/Month
- 14,000– 17,000Rs /Month
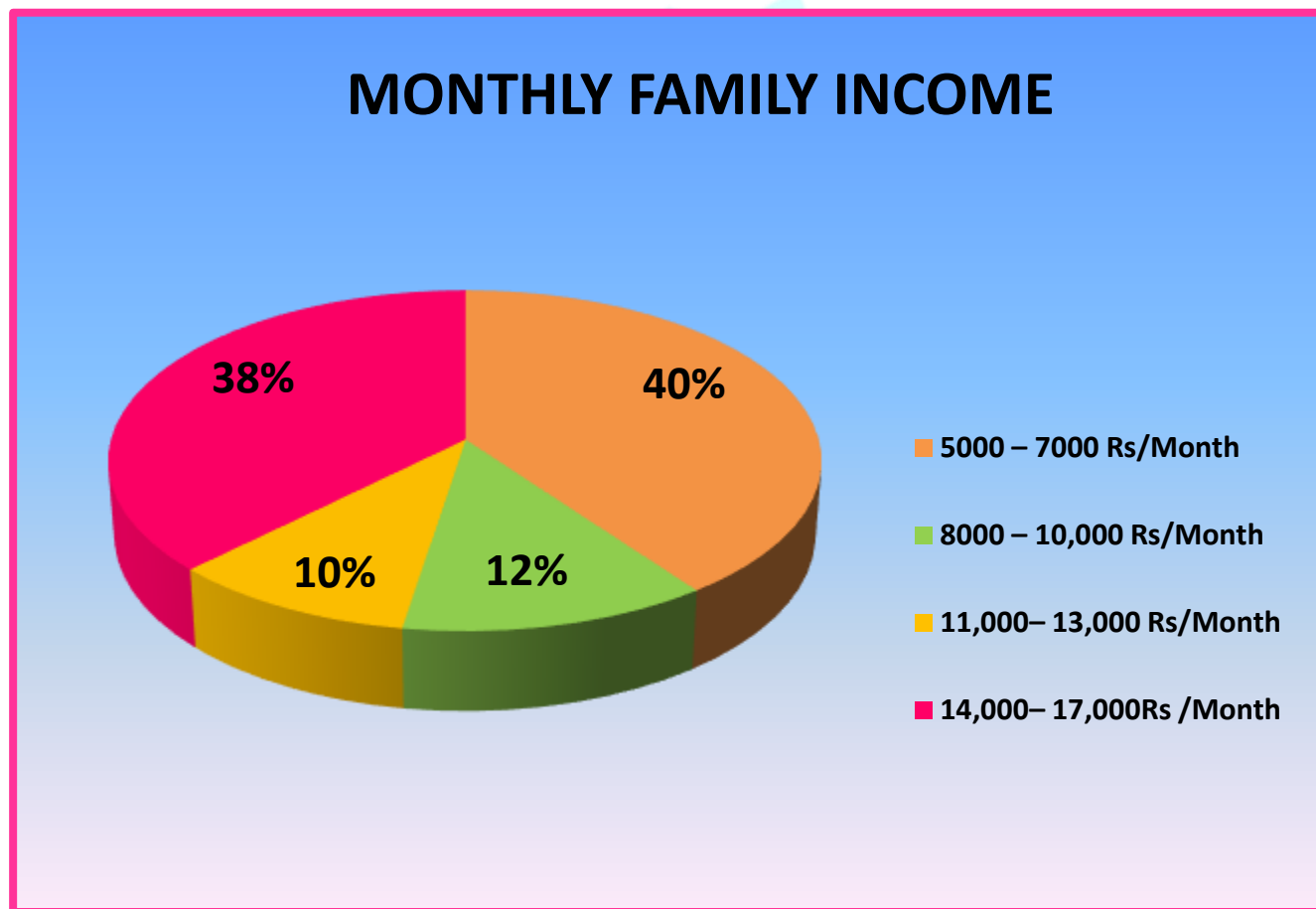
The above figure shows majority of post-operative valve replacement clients are 16(40%) between 5000 – 7000 Rs/month, 15(38%) between 14,000 – 17,000 Rs/month, 5(12%) are in between 8000 – 10,000 Rs/month and only 4(10%) are in between 11,000 – 13,000 Rs/month.

FIGURE – 14

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS
ACCORDING TO THEIR TYPE OF FAMILY**
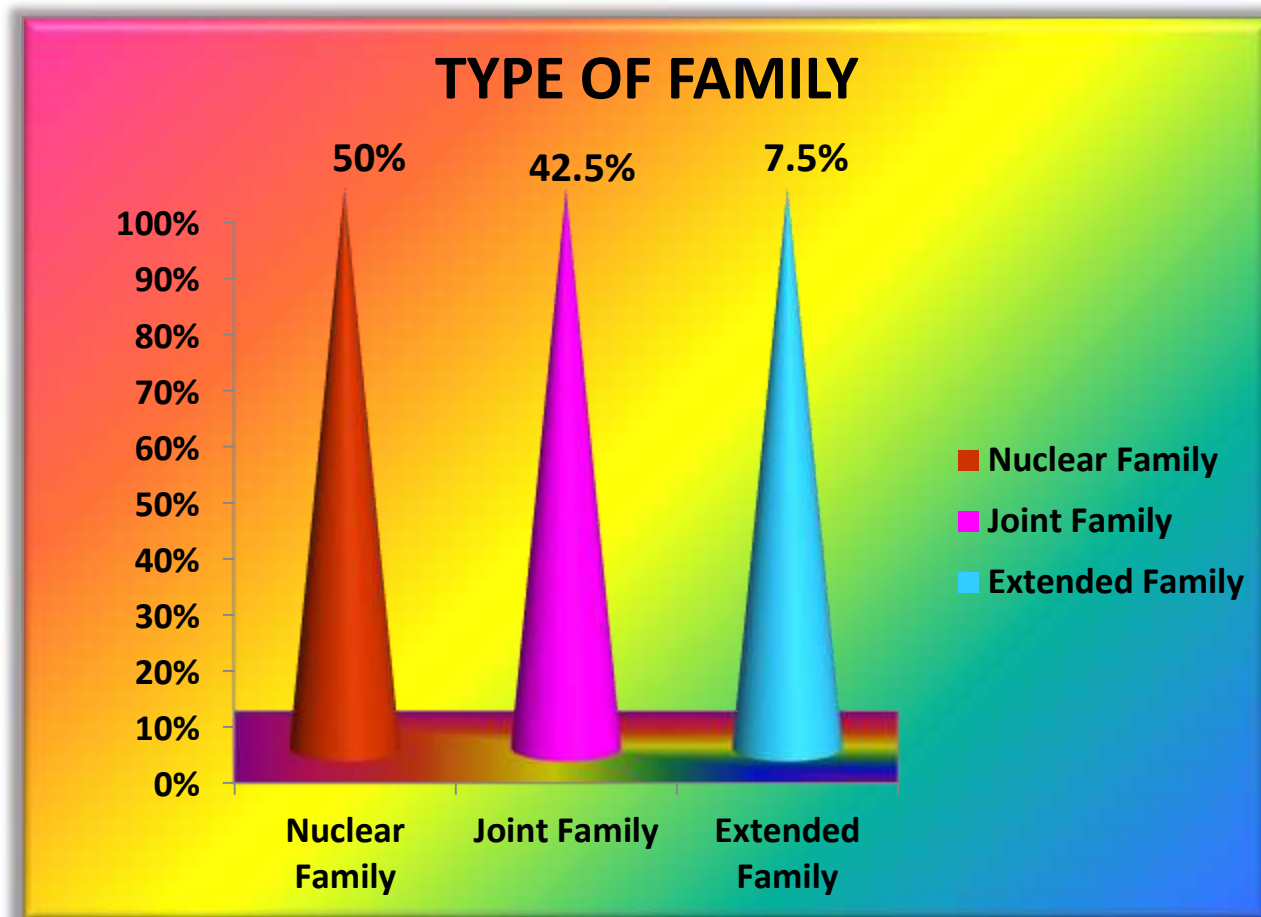
The above graph shows majority of post-operative valve replacement clients 20(50%) comes in nuclear family, 17(42.5%) comes in joint family, 3(7.5%) comes under extended family and 0% comes under the blended family.

FIGURE – 15

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS
ACCORDING TO THEIR MARITAL STATUS
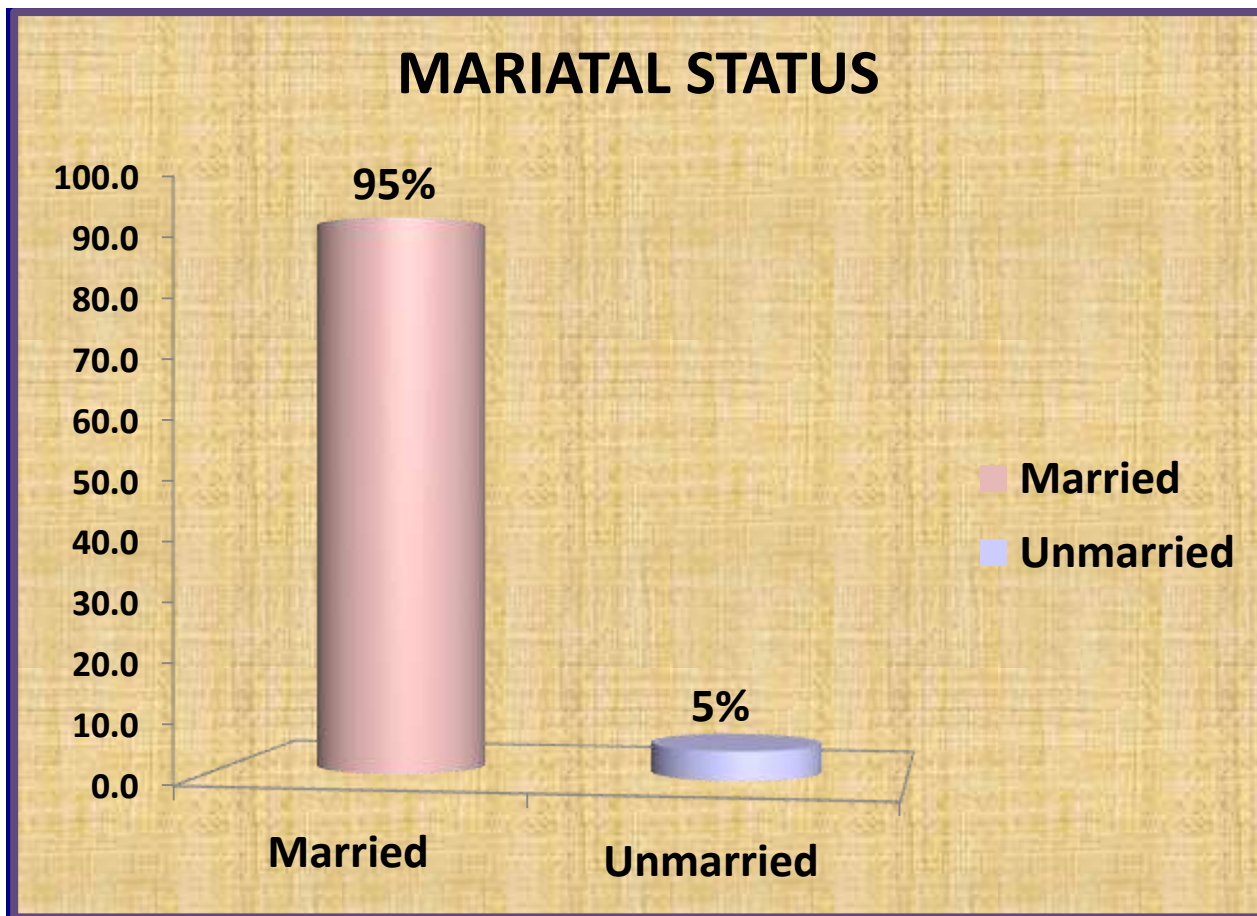
The above figure shows that majority of post-operative valve replacement clients are 38(95%) married and only 2(5%) are unmarried.

FIGURE – 16

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR FAMILY HISTORY OF VALVULAR DISEASES

FAMILY HISTORY OF VALVULAR DISEASE
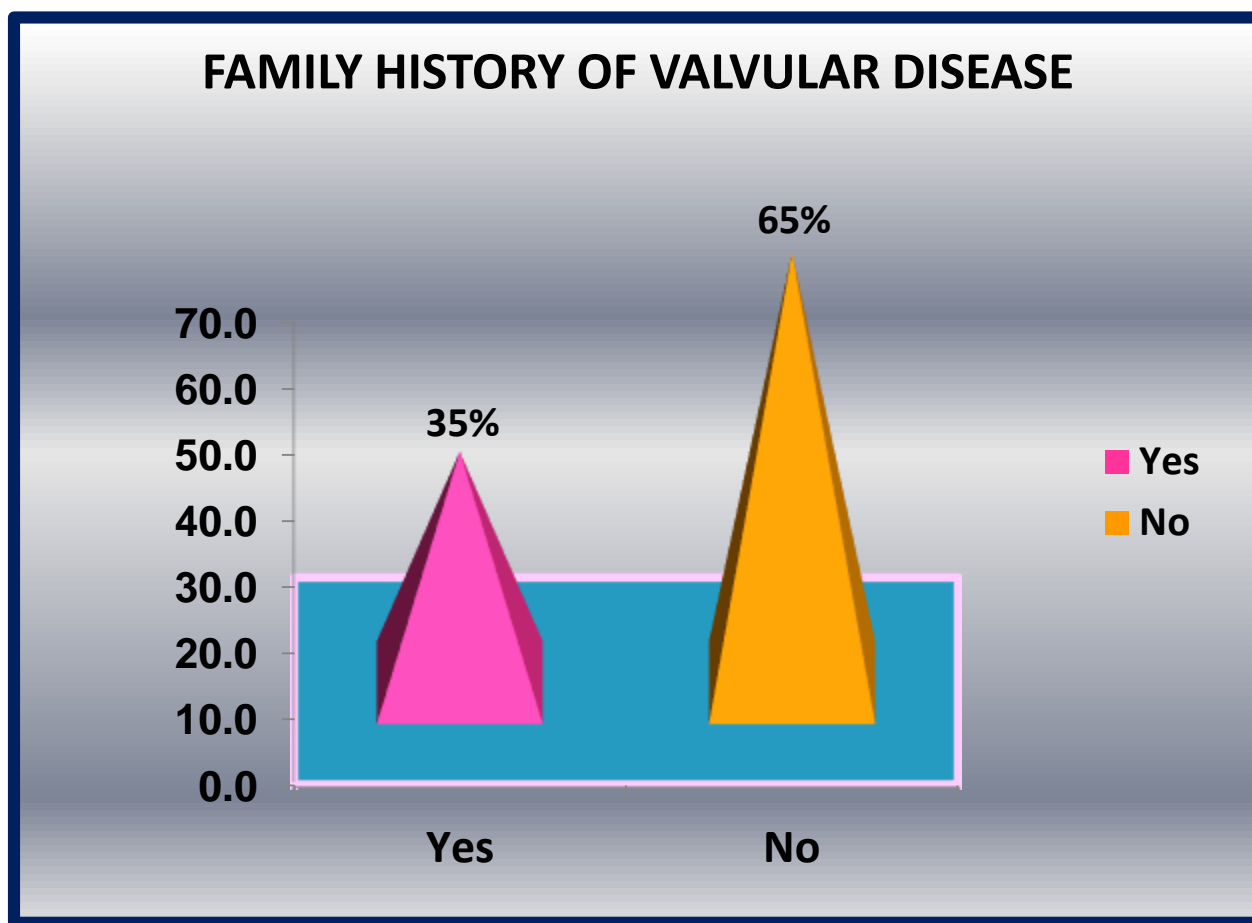
The above figure shows majority of post-operative valve replacement clients 26(65%) have no family history of valvular diseases and 14(35%) have family history of valvular diseases.

FIGURE – 17

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CLIENTS ACCORDING TO THEIR PERSONAL HABITS
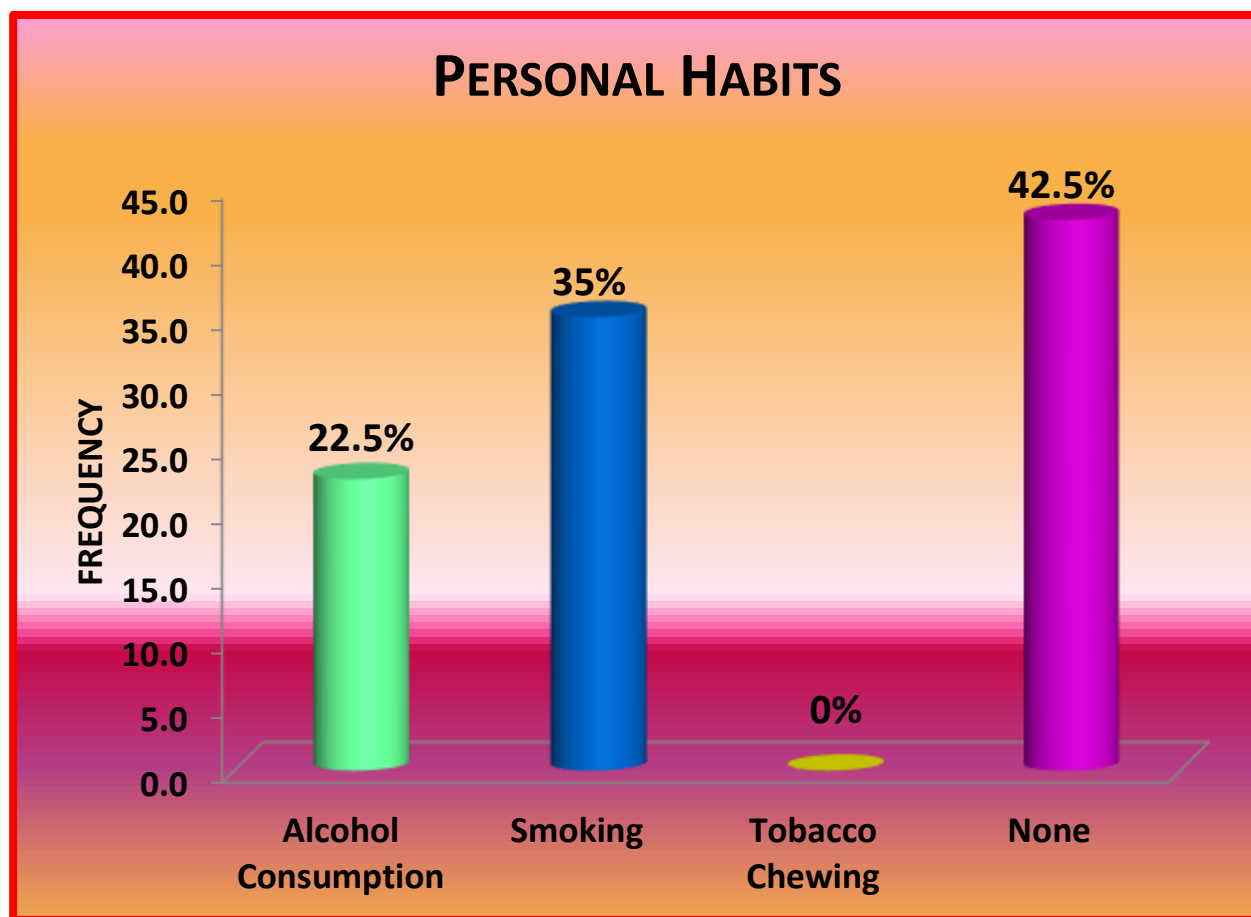
The above figure shows majority of post-operative valve replacement clients 17(42.5%) have nil personal habits, 14(35%) have habit of smoking, 9(22.5%) have habit of alcohol consumption and 0% of tobacco chewing.

SECTION – II

KNOWLEDGE OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS ON HOME CARE MANAGEMENT IN PRE – TEST

TABLE – 5

Mean, Standard Deviation and Mean Percentage of the knowledge scores of post-operative valve replacement clients related to home care management in pre-test

(N=40)

S. NO	KNOWLEDGE VARIABLES	MEAN	STANDARD DEVIATION	MEAN PERCENTAGE	RANGE
1.	General knowledge regarding valvular heart disease	8.48	3.130	47.0833	11
2.	Home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up	9.58	3.809	41.6304	12
3.	Overall knowledge scores	18.05	6.051	44.0244	19

From the above table, in the area of knowledge variable regarding general knowledge on valvular heart disease, the mean score obtained by the subjects was 8.48+_3.130 and the range is 11.

In the area of knowledge variable regarding home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up, the mean score obtained by the subjects was 9.58+_3.809 and the range is 12.

The overall knowledge mean score in the pre-test was 18.05+_6.051.

TABLE - 6

FREQUENCY AND PERCENTAGE DISTRIBUTION OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS ACCORDING TO THE GRADING OF THEIR KNOWLEDGE SCORES IN PRE-TEST

(N=40)

S. No	Knowledge Variables	Below Average (0 - 33.3%)		Average (33.3%-66.6%)		Above Average (66.6 – 100%)	
		F	%	F	%	F	%
1.	General knowledge regarding valvular heart diseases	10	25.0%	27	67.5%	3	7.5%
2.	Home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up	14	35.0%	26	65.0%	0	0.0%
3.	Overall knowledge scores	13	32.5%	27	67.5%	0	0.0%

The above table depicts that 10(25.0%) subjects had below average, 27(67.5%) subjects had average and 3(7.5%) had above average knowledge on regarding valvular heart diseases. 14(35.0%) subjects had below average, 26(65.0%) had average knowledge on home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up.

In the overall knowledge 13(32.5%) subjects had below average and 27(67.5%) had average knowledge in the pre-test.

SECTION – III

KNOWLEDGE OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS ON HOME CARE MANAGEMENT IN POST – TEST

TABLE – 7

Mean, Standard Deviation and Mean Percentage of knowledge scores of post-operative valve replacement clients related to home care management in post-test

(N=40)

S. NO	KNOWLEDGE VARIABLES	MEAN	STANDARD DEVIATION	MEAN PERCENTAGE	RANGE
1.	General knowledge regarding valvular heart disease	13.68	3.108	75.9722	9
2.	Home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up	17.43	3.388	75.7609	12
3.	Overall knowledge scores	31.10	4.482	75.8537	17

From the above table, in the area of knowledge variable regarding general knowledge on valvular heart disease, the mean score obtained by the subjects was 13.68+_3.108 and the range is 9.

In the area of knowledge variable regarding home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up, the mean score obtained by the subjects was 17.43+_3.388 and the range is 12.

The overall knowledge mean score in the post-test was 31.10+_4.482

TABLE - 8

FREQUENCY AND PERCENTAGE DISTRIBUTION OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS ACCORDING TO THE GRADING OF THEIR KNOWLEDGE SCORES IN POST-TEST

(N=40)

S.No	Knowledge Variables	Below Average (0 - 33.3%)		Average (33.3%-66.6%)		Above Average (66.6 – 100%)	
		F	%	F	%	F	%
1.	General knowledge regarding valvular heart diseases	0	0.0%	15	37.5%	25	62.5%
2.	Home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up	0	0.0%	12	30.0%	28	70.0%
3.	Overall knowledge scores	0	0.0%	8	20.0%	32	80.0%

The above table depicts that 15(37.5%) subjects had average and 25(62.5%) had above average knowledge regarding valvular heart diseases. 12(30.0%) subjects had average and 28(70.0%) had above average knowledge on home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up.

In the overall knowledge 8(20.0%) subjects had average and 32(80.0%) had above average knowledge in the post-test

SECTION – IV

COMPARISON OF PRE – TEST AND POST – TEST KNOWLEDGE SCORES ON HOME CARE MANAGEMENT OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS

TABLE - 9

(N=40)

S. No	Knowledge Variables	Pre-Test Mean	Post-Test Mean	Mean Difference	't' value	
					Calculated Value	Table Value
1.	General knowledge regarding valvular heart diseases	8.48	13.6750	5.20000	7.738	2.02
2.	Home management after valve replacement surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up	9.58	17.3250	7.75000	9.692	2.02
3.	Overall knowledge scores	18.05	31.000	12.9500	12.828	2.02

The above table depicts that the obtained "t" value 12.828 at the level of significance 0.05 is greater than the table value 2.179. Therefore 't' value is found to be highly significant and hence the research hypothesis stating that there will be significant increase in the level of knowledge on the selected aspects of home care management on post-operative valve replacement clients after planned teaching programme was accepted.

FIGURE – 18

COMPARISON OF PRE – TEST AND POST – TEST KNOWLEDGE SCORES ON HOME CARE MANAGEMENT OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS
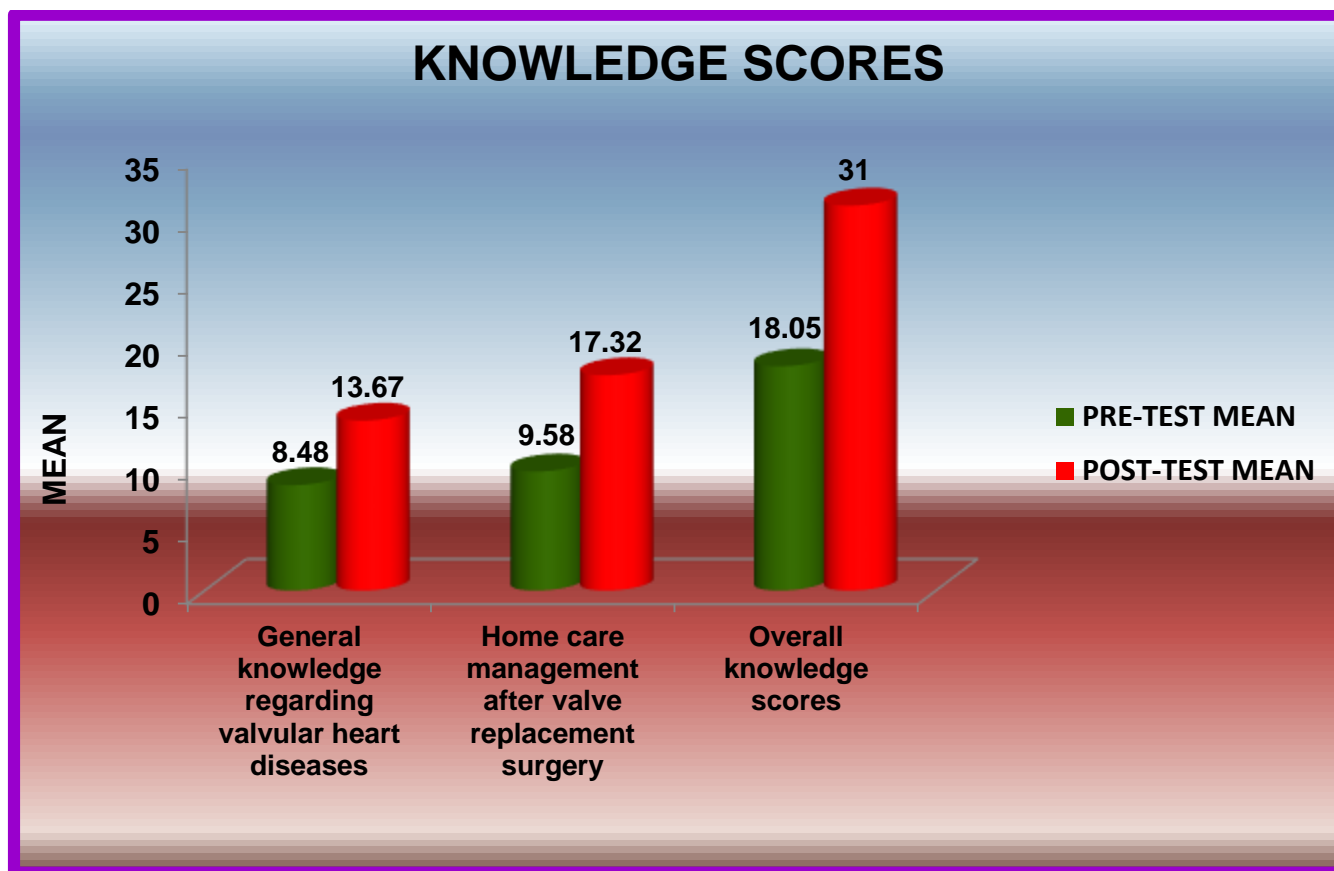
KNOWLEDGE SCORES

In the area of knowledge regarding general information on valvular heart diseases, the pre-test score was 8.48+_3.130 and post test score was13.67+_ 3.108.

In the area of knowledge regarding home management after valve replacement surgery (discharge teaching, self care and follow up), the pre-test score was 9.58+_ 3.809 and the post-test score was 17.32+_ 3.388.

The overall knowledge score in pre-test was 18.05+_ 6.051 and the post-test was 31.00+_4.482.

SECTION – V

TABLE - 10

ASSOCIATION BETWEEN THE BACKGROUND VARIABLES AND POST – TEST KNOWLEDGE SCORES ON HOME CARE MANAGEMENT OF POST-OPERATIVE VALVE REPLACEMENT CLIENTS

(N=40)

S. No	Back Ground Variables	Category	Total Score		Chi-Square Value	Table Value	Inference
			< Median	> Median			
1.	Age	30-39 years	4	4	1.429 df - 3	7.815	NS p>0.05
		40-49 years	4	4			
		50-59 years	10	4			
		60 years and above	6	4			
2.	Gender	Male	16	8	1.111 df - 1	3.841	NS p>0.05
		Female	8	8			
3.	Education qualification	Primary school	14	3	10.301 df - 3	7.815	*S
		High school	4	1			
		Intermediate	2	2			
		Graduate and above	4	10			
4.	Occupation	Employed	9	7	2.076 df - 3	7.815	NS p>0.05
		Unemployed	9	3			
		Business	2	3			
		retired	4	3			
5.	Monthly family income	5000-7000 rs/month	12	4	5.486 df - 3	7.815	NS p>0.05
		8000-10,000 rs/month	1	4			
		11,000-13,000 rs/month	3	1			
		14,000-17,000 rs/month	8	7			
6.	Type of family	Nuclear family	13	7	0.617 df - 2	5.991	NS p>0.05
		Joint family	9	8			

		Extended family	2	1			
		Blended family	0	0			
7.	Marital status	Married	23	15	0.088 df - 1	3.841	NS p>0.05
		Unmarried	1	1			
		Any other					
8.	Family history of valvular heart disease	Yes	9	5	0.165 df - 1	3.841	NS at p>0.05
		No	15	11			
9.	Personal habits	Alcohol consumption	5	4	1.189 df - 2	5.991	NS at p>0.05
		Smoking	10	4			
		Tobacco chewing	0	0			
		Drug addiction	9	8			

The above table describes the selected background variables such as age, gender, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and personal habits made no significant association (p>0.05) in the post- test knowledge scores on home care management among post-operative valve replacement clients.

The background variable such as educational status with x^2 value 0.002 made significant association (p>0.05) with home care management among post-operative valve replacement clients. But majority of variables made no significant association. Hence H_2 is rejected i.e. there is no significant association between home care management with their selected background variables.

Therefore, it is inferred that the planned teaching programme was effective in increasing knowledge of post-operative valve replacement clients independent of all their background variables except educational status.

EPILOGUE

This chapter dealt with the analysis of data including the objectives of the study which was divided into three five. **Section – I** deals with frequency and percentage distribution of post-operative valve replacement clients according to selected background variables **Section - II** dealt with knowledge of post-operative valve replacement clients on home care management in pre – test. **Section – III** dealt with knowledge of post-operative valve replacement clients on home care management in post – test. **Section – IV** dealt with comparison of pre – test and post – test knowledge scores on home care management of post-operative valve replacement clients. **Section – V** dealt with association between the background variables and post – test knowledge scores on home care management of post-operative valve replacement clients.
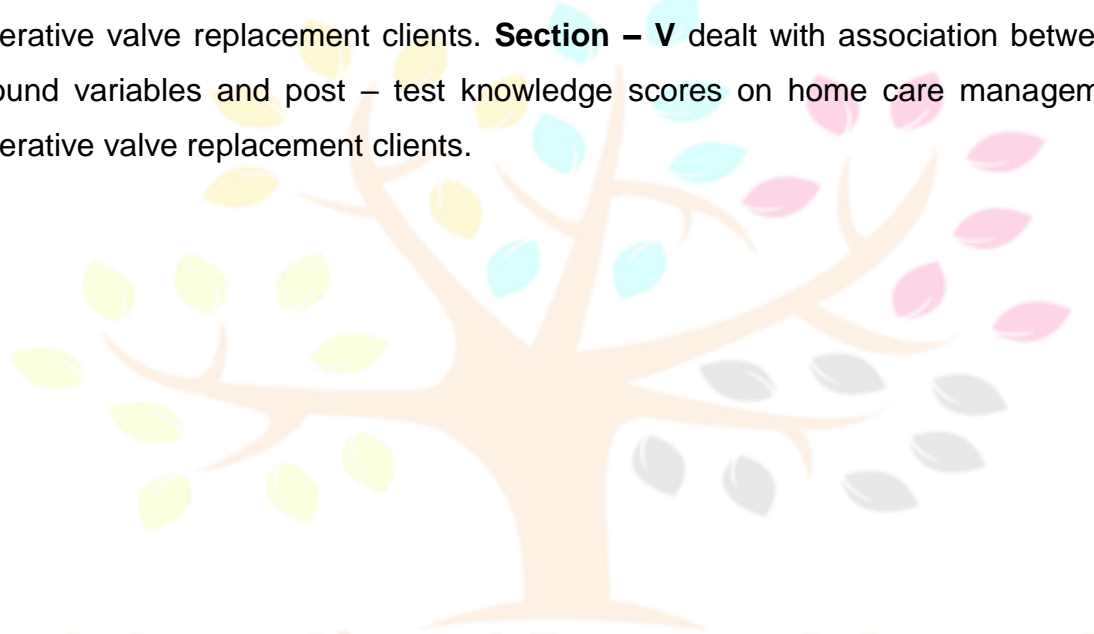
CHAPTER - V

EPILOGUE, FINDINGS, CONCLUSION, DISCUSSION, IMPLICATIONS, LIMITATIONS

AND RECOMMENDATIONS

CHAPTER – V

EPILOGUE, FINDINGS, CONCLUSION, DISCUSSION, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

EPILOGUE

The present chapter is devoted to the summary of the findings, limitations, interpretation of the results and recommendations that incorporate the implications of the study

The primary aim of the study was "A study to assess the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management of among post-operative valve replacement clients at selected hospital, Secunderabad, Telangana."

OBJECTIVES OF THE STUDY

The objectives of the study were:

1) To assess the level of knowledge on selected aspects of home care management among post-operative valve replacement clients by pre-test knowledge scores.

2) To evaluate the effectiveness of planned teaching programme regarding selected aspects of home care management among post-operative valve replacement clients by comparing pre test and post test knowledge scores.

3) To test the significant association between the post test knowledge scores of post-operative valve replacement clients with their selected background variables.

The background variables of the study were age, gender, educational status, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and personal habits.

Conceptual model is a theoretical structure of assumptions, principles and rules that hold together the ideas comprising a broad concept. In the present study the conceptual frame work is developed on the basis of **Imogene King's Goal Attainment Theory.**

A review of literature has helped the investigator to get awareness of the present problem and gain in depth knowledge regarding various types of heart valvular diseases, its treatment regimen, diagnostic measurements, sign and symptoms and strategies used to improve the of different aspects on home care management after valve replacement surgery. It also helped to develop the conceptual frame work, development of the tool for data collection and for planning data analysis.

Pre – experimental research design was used to conduct the study. The study was conducted at Sunshine Hospital, Secunderabad, Telangana. The population for the present study consisted of 40 post-operative valve replacement clients, who are available and willing to participate in the study at the time of data collection. Non – probability convenient sampling has been used to select 40 samples.

A structured knowledge questionnaire was prepared by the investigator to assess the knowledge of the post-operative valve replacement patients on home care management. It consists of two parts:

Part – A: It deals with the demographic data and constitutes 9 questions namely age, gender, educational status, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and personal habits.

Part – B: It consists of 40 items that were classified into 2 sections based on different practices followed for home care management after valve replacement surgery.

- **Section – 1:** It consists of 18 items on general knowledge regarding valvular heart diseases
- **Section – 2:** It consists of 22 items on home care management after valve replacement surgery (discharge teaching, self care and follow up)
    - Question no 19 – 22 deals with personal hygiene
    - Question no 23 – 24 deals with items related to exercises
    - Question no 25 – 26 deals with weights and strain
    - Question no 27 – 29 deals with items related to diet
    - Question no 30 – 31 deals with cardiac rehabilitation
    - Question no 32 – 35 deals with items related to drug therapy
    - Question no 36 – 40 deals with follow ups

To obtain content validity, the tool was given to eight experts including six nursing personnel in the field of Medical and Surgical Nursing, one cardiologist and a statistician. Few items were modified and there by content validity ascertained. The reliability of the tool was checked by Karl Pearson and Spearman Brown Prophecy Formula. The results indicated that the tool was valid and reliable. Pilot study was conducted on the sample of 10 subjects for a period of one week and the results revealed the feasibility and appropriateness of the tool. The main study was conducted for a period of one week. The data were analyzed with the help of descriptive and inferential statistics and the findings were interpreted.

FINDINGS

The selected background variables were age, gender, educational status, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and personal habits.

The findings are based on the objectives of the study:

Objective - 1: To assess the level of knowledge on selected aspects of home care management among post-operative valve replacement clients by pre-test knowledge scores.

In the area of knowledge variable on valvular heart diseases the mean score of the subjects was 8.48+_3.130.

In the area of knowledge variable on home management after valve replacement surgery (discharge teaching, self care and follow up)) through personal hygiene, weights and strain, exercises, diet, cardiac rehabilitation, drug therapy and follow up   the mean score of the subjects was 9.58+_3.809

The overall mean score in the pre test was 18.05+_6.051.

Objective – 2: To evaluate the effectiveness of planned teaching programme regarding selected aspects of home care management among post-operative valve replacement clients by comparing pre-test and post-test knowledge scores.

The mean score of overall knowledge in the pre test was 18.05+_6.051.

The mean score of overall knowledge in the post test was 31.10+_4.482.

The obtained "t" value 12.825 is greater than the table value 2.179 at the level of 0.05. This evidenced that the planned teaching programme was effective in increasing the knowledge level of post-operative valve replacement clients on home care management.

Objective - 3: To test the significant association between the post test knowledge scores of post-operative valve replacement clients with their selected background variables.

The background variable such as educational status with x^2 value 0.002 made significant association ($p>0.05$) with home care management among post-operative valve replacement clients. The other back ground variables such as age, gender, occupational status, monthly family income, type of family and marital status, family history of valvular heart disease and personal habits on home care management after valve replacement surgery made no significant difference ($p > 0.05$) in the post – test knowledge scores.

But majority of variables made no significant association. Hence H1 is rejected i.e., there is no significant association between post test knowledge scores of post-operative valve replacement clients with their selected demographic variables and it is concluded that the planned teaching programme was effective in increasing the knowledge of post-operative valve replacement clients, independent of their background variables.

DISCUSSION

The present study was taken up, in an effort to assess the knowledge of post-operative valve replacement clients through pre and post test. Planned teaching programme was conducted on home care management after valve replacement surgery. The post-operative valve replacement clients had only 18.05+_6.051 in the pre - test and after the planned teaching programme their knowledge level increased to 31.10+_4.482. The paired "t" test showed that the mean difference between the pre - test and the post - test knowledge score was highly significant.

CONCLUSION

The aim of the study was to assess the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management among post-operative valve replacement clients at selected hospital, Secunderabad, Telangana.

The following conclusions are made based on the following study:

- ✠ There was a significant increase in the knowledge of valve replacement patients after the administration of planned teaching programme.
- ✠ The gain in knowledge after the planned teaching programme for the valve replacement patients on home care management after valve replacement surgery was 31.00(75.85%).
- ✠ It is concluded that the planned teaching programme increased the knowledge of valve replacement patients regarding home care management after valve replacement surgery. The knowledge may be utilized by the valve replacement patients to modify their hygiene, dietary, exercise, rehabilitation, drug therapy, weigh and strain and follow up the practices after the surgery.

✠ The knowledge can be utilized by the family members and friends of the valve replacement patients, so that they can also adopt appropriate home care management after valve replacement surgery

IMPLICATIONS

The result of the study has drawn several implications for Nursing practice, Nursing education, Nursing administration and Nursing research.

Nursing Practice

➤ Nurses working in cardiac hospitals can educate her patients on various practices followed for home care management after valve replacement surgery such as personal hygiene, weights and strain, exercises, diet pattern, drug therapy, cardiac rehabilitation and follow-ups.

➤ Nurses working in a community centers can directly appreciate and motivate the home care management and educate the family on importance of follow up.

➤ A nurse can also identify the risky behaviors that can lead to heart valvular diseases and educate and motivate the patients to avoid such stressful behaviors.

➤ Nurses working with cardiac patients undergoing valve replacement surgery promote positive attitude.

➤ Nurses should encourage patients to undergo periodical investigations, to evaluate the functioning of heart valves.

Nursing Education

The nursing students should be prepared to work in cardiac centers and rehabilitation centers

➤ Education is the key concept in improving the knowledge of nurses. Nurses need to upgrade their knowledge and practice based on research findings.

➤ In order to enhance the students knowledge and practice planned teaching programme can be used as an effective method and teaching protocol for ready references.

➢ Learning opportunities should be provided to the nursing students to develop planned teaching programme and should be added in the nursing curriculum.

➢ Self instruction module can be designed to disseminate information regarding home care management after valve replacement surgery.

➢ Students should be motivated to prepare and use appropriate audio - visual aids like pamphlets, booklets and posters on home care management after valve replacement surgery.

➢ The information on various rehabilitation programmes and investigations can be considered to be added to the nursing curriculum, so that the student nurses get adequate knowledge about the same and adopt appropriate healthy practices in their life.

Nursing Administration

➢ Nurse administrators should encourage, plan and conduct staff development programmes so that the nurse practitioners in all departments are kept informed about the scientific advancement in the home care management after valve replacement surgery.

➢ Administrators of health services should organize the in–service educative, public awareness programmes and camps can be arranged by the nurse administrator.

➢ Various community outreach screening and awareness programmes on valvular diseases can be planned and conducted.

➢ Emphasis should be made on educating patients regarding home care management practices, treatment regimen and follow ups.

➢ The nurse administrator can design various banners and posters regarding home care management after valve replacement surgery including early screening and various diagnostic investigations and exhibit them to disseminate the information to the public.

➢ Nurses can use appropriate techniques on standards while rendering care to the heart valvular patients.

Nursing Research

➢ The study will be a valuable reference for future researchers

➢ The study will motivate the beginning researchers to conduct similar study in large scale basis and on comparative basis

➢ The findings of the study would help to expand the scientific body of professional knowledge upon which further research can be conducted on home care management after valve replacement.

➢ The research will provide credibility to those who conduct research studies on the effectiveness of planned teaching programme.

LIMITATIONS

The study has the following limitations:

◆ The sample of the study are limited to patients who underwent valve replacement in Sunshine hospital, Secunderabad, Telangana

◆ The sample size was limited to 40 only.

RECOMMENDATIONS

In the light of the findings listed above and the personal experience of the investigator the following suggestions are put forth

▪ An experimental study can be conducted to show strong statistical associations.

▪ A similar study can be replicated on a large sample to generalize the findings to a large population.

▪ A comparative study can be conducted between the knowledge and practices of valve replacement patients regarding home care management.

▪ An experimental study can be conducted to assess the assess the teaching programme on home care management of patients after valve replacement surgery.

▪ A study can be conducted to assess the practices followed among heart patients undergoing the valve replacement surgeries.

EPILOGUE

In this chapter the investigator dealt with epilogue, findings, discussions, various nursing implications of the study and limitations, as given conclusions and recommendations which the investigator experienced in the study.

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CHAPTER - VI

ANNEXURES

ANNEXURE – I

LETTER SEEKING PERMISSION OF EXPERTS FOR ESTABLISHING VALIDITY OF TOOL AND PLANNED TEACHING PROGRAMME

From,
Ms. T. Janet Shushunova
M.Sc Nursing II Year,
Eashwari Bai College of Nursing,
Secunderabad – 500026.

TO,

_____

_____

Forwarded Through,
Principal,
Eashwari Bai Memorial College of Nursing,
Secunderabad - 500026.

Sub: Request for acceptance to validate the tool and PTP

Respected Madam/ Sir,

I am a post graduate student (Medical and Surgical Nursing) of Eashwari Bai Memorial College of Nursing. I have selected the below mentioned topic for research project to be submitted to Dr.NTR UNIVERSITY OF HEALTH SCIENCES, VIJAYAWADA as a partial fulfilment for the award of Masters of Science in Nursing.

TITLE OF THE TOPIC:

A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA.

With regard to this, I request your kind acceptance to validate my research tool by one week in this enclosed acceptance form. I would be obliged and thankful to hear from you.

Thanking you

Yours Sincerely,
(T. Janet Shushunova)

ANNEXURE – II

LETTER REQUESTING OPINION AND SUGGESTION OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF TOOL

From,
Ms. T. Janet Shushunova
M.Sc Nursing II Year,
Eashwari Bai College of Nursing,
Secunderabad – 500026.

TO,
_____
_____
Forwarded Through
Principal,
Eashwari Bai Memorial College of Nursing,
Secundersabad- 50s0026.

Sub: Request for opinions and suggestions of experts for establishing content validity of tool

Respected Madam/ Sir,
I am a post graduate student (Medical and Surgical Nursing) of Eashwari Bai Memorial College of Nursing. I have selected the below mentioned topic for research project to be submitted to Dr. NTR UNIVERSITY OF HEALTH SCIENCES, VIJAYAWADA as a partial fulfilment of nursing degree.

TITLE OF THE TOPIC: A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA.

With regard to this, I request to validate my research tool and STP for its appropriateness and relevancy. I would be highly obliged and remain thankful for your great help if you could validate and send it as soon as possible

Thanking you

Enclosures:
Objectives of the study
Planned teaching programme (PTP)
Questionnaire   Yours Faithfully, Date:
(T. Janet Shushunova)
Place: Secunderaba

ANNEXURE – III

ACCEPTENCE FORM FOR VALIDATION OF TOOL AND PTP

TOPIC:

A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA.

I..

Would/ would not agree upon in validating the tool and PTP

Name: Signature:

Designation: Date:

ANNEXURE – IV

CONTENT VALIDITY CERTIFICATION

I hereby certify that I have validated the research tool of Ms. T. Janet Shushunova, M.Sc. Nursing II year student who is undertaking a study on "**A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA.**

PLACE: SIGNATURE OF THE EXPERT:

DATE: NAME:

                                                    DESIGNATION:

ANNEXURE – V

LIST OF EXPERTS WHO VALIDATED THE TOOL AND PLANNED TEACHING PROGRAMME

1. Mrs. Jayanthi
   Assistant Professor
   Jesus Mary Joseph College of Nursing,
   Sanath Nagar, Hyderabad

2. Sr. Anne Ponnattil
   Principal,
   Vijay Marie College of Nursing,
   Begumpet, Hyderabad

3. Mrs. Sonali Benergi
   Assistant Professor and Administrative Co-Ordinator
   Apollo College of Nursing,
   Jubilee Hills, Hyderabad

4. Mrs. Nagamani
   Principal,
   Indo-American College of Nursing,
   Banjara Hills, Hyderabad

5. Mrs. K. T. Sheeba
   Professor,
   Government College of Nursing,
   Afzalgunj, Hyderabad

6. Mrs. Gnana Lakshmi
   Principal,
   Yashoda College of Nursing,
   Malakpet, Hyderabad

7. Dr. E. Krishna Kishore
    Research Department, Statistics,
    College of Science, Osmania University,
    Hyderabad

8. Dr. Sanjeev
    Cardiologist,
    Sunshine Hospital,
    Secunderaba

ANNEXURE – VI

LETTER SEEKING PERMISSION TO CONDUCT THE PILOT STUDY

From:
The Principal,
Eashwari Bai Memorial College of Nursing,
Secunderabad-5000026

To,

_____

_____

Sub: Request for permission to conduct the study

Respected Madam,

I Ms. T. JANET SHUSHUNOVA is a second year student of master of nursing course (Medical and Surgical Nursing) at this college, she has selected the below mentioned topic for research project to be submitted to DR.NTR UNIVERSITY OF HEALTH SCIENCES, VIJAYAWADA as a partial fulfilment of nursing degree.

TITLE OF THE TOPIC:

"**A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA**".

Ms. T. Janet Shushunova is in need of your esteemed help and co-operation as she is interested in conducted her study in your hospital among post-operative valve replacement clients on home care management. I am requesting you to kindly extend the necessary permission to Ms. T. Janet Shushunova and to provide necessary facilities for her study

All the information provided by the patients will be kept extremely confidential and it will be used only for research purpose

Thank you

Your Sincerely,

PRINCIPAL.

EASHWARIBAI MEMORIAL COLLEGE OF NURSING

10-1-5/C,ROAD NO.4, WEST MARREDPALLY, SECUNDERABAD - 500 026. TELANAGANA
(Recognized by the Government of Andhra Pradesh)
(Affiliated to N.T.R. University of Health Sciences, Vijayawada File No. 258/A5/2000)
(Approved by the Indian Nursing Council, New Delhi File No. 11-31/2000-INC)
Tel : 27701569 / 27701986 Fax : 27716287
Website : www.ebmcongeeta.com E-mail : ebmcon@gmail.com

Chair Person
Dr. J. GEETHA REDDY
M.R.C.O.G. (Lon)
M.AUST., C.O.G.F.A.O

Vice Chairman
Dr. D. RAMACHANDRA REDDY
F.F.A.R.A.C.S (Aust)
F.F.A.R.A.C.S (Lon) F.A.N.C.A.

Principal Mrs. B.N. Prasanna Kumari, M.Sc. (Nursing)

From:
The Principal,
Eashwari Bai Memorial College of Nursing,
Secunderabad-5000026

To,
The Medical Director,
Care Hospital, Nampally.

Sub: Request for permission to conduct the study

Respected Madam,

I Ms. T. JANET SHUSHUNOVA is a second year student of Master of Nursing course (Medical and Surgical Nursing) at this college, she has selected the below mentioned topic for research project to be submitted to DR. NTR UNIVERSITY OF HEALTH SCIENCES, VIJAYAWADA as a partial fulfillment of nursing degree.

TITLE OF THE TOPIC:

"A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST - OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA".

Ms. T. Janet Shushunova is in need of your esteemed help and co-operation as she is interested in conducting her study in your hospital among post - operative valve replacement clients on home care management. I am requesting you to kindly extend the necessary permission to Ms. T. Janet Shushunova and to provide necessary facilities for her study.

All the information provided by the patients will be kept extremely confidential and it will be used only for research purpose

Thank you,

Yours Sincerely,

PRINCIPAL.
PRINCIPAL
Eashwari Bai Memorial College of Nursing
West Marredpally, Secunderabad-500 026
Phone: 27701887, 27701986

Dr. D.N. KUMAR
MEDICAL DIRECTOR
CARE HOSPITAL, NAMPALLY
HYDERABAD.

lissyphilip
2/3/16

ANNEXURE – VII

LETTER SEEKING PERMISSION TO CONDUCT THE MAIN STUDY

From:

The principal,

Eashwari Bai Memorial College of Nursing,

Secunderabad – 5000026

To,

_____

_____

Sub: Request for permission to conduct the research study

Respected Madam,

Ms. T. Janet Shushunova is a second year student of Master of Nursing course (Medical and Surgical Nursing) at this college, she has selected the below mentioned topic for research project to be submitted to Dr.NTR University of Health Sciences, Vijayawada as a partial fulfilment of nursing degree.

TITLE OF THE TOPIC:

"**A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA**".

Ms. T. Janet Shushunova is in need of your esteemed help and co-operation as she is interested in conducting her study in your hospital among post-operative valve replacement clients on home care management. I am requesting you to kindly extend the necessary permission to Ms. T. Janet Shushunova and to provide necessary facilities for her study.

All the information provided by the patients will be kept extremely confidential and it will be used only for research purpose.

Thanking you

Yours sincerely,

PRINCIPAL.

EASHWARIBAI MEMORIAL COLLEGE OF NURSING

10-1-5/C, ROAD NO.4, WEST MARREDPALLY, SECUNDERABAD - 500 026. TELANAGANA
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Tel : 27701569 / 27701986 Fax : 27716287
Website : www.ebmcongeeta.com E-mail : ebmcon@gmail.com

Chair Person
Dr. J. GEETHA REDDY
M.R.C.O.G. (Lon)
M.AUST., C.O.G.F.A.O

Vice Chairman
Dr. D. RAMACHANDRA REDDY
F.F.A.R.A.C.S (Aust)
F.F.A.R.A.C.S (Lon) F.A.N.C.A.

Principal Mrs. B.N. Prasanna Kumari, M.Sc. (Nursing)

From:
The Principal,
Eashwari Bai Memorial College of Nursing,
Secunderabad – 5000026

To,
The Medical Superintendent.
Sunshine Hospital, Sec-bad.

Sub: Request for permission to conduct the research study

Respected Madam,

Ms. T. Janet Shushunova is a second year student of Master of Nursing course (Medical and Surgical Nursing) at this college, she has selected the below mentioned topic for research project to be submitted to DR. NTR UNIVERSITY OF HEALTH SCIENCES, VIJAYAWADA as a partial fulfillment of nursing degree.

TITLE OF THE TOPIC:

"A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF HOME CARE MANAGEMENT AMONG POST-OPERATIVE VALVE REPLACEMENT CLIENTS AT SELECTED HOSPITAL, SECUNDERABAD, TELANGANA."

Ms. T. Janet Shushunova is in need of your esteemed help and co-operation as she is interested in conducting her study in your hospital among post - operative valve replacement clients on home care management. I am requesting you to kindly extend the necessary permission to Ms. T. Janet Shushunova and to provide necessary facilities for her study.

All the information provided by the patients will be kept extremely confidential and it will be used only for research purpose.

Yours Sincerely,

Thanking you

PRINCIPAL
Eashwari Bai Memorial College of Nursing
West Marredpally, Secunderabad-500 026
Phone: 27701687, 27701988

SHINY CHERIAN
Nursing Superintendent
Sunshine Hospital
Secunderabad.

ANNEXURE - VIII

CERTIFICATE OF EDITING IN ENGLISH

This is to certify that Ms. T. Janet Shushunova of M.Sc Nursing 2nd year of Eashwari Bai Memorial College of Nursing, has done a research study on the topic **"A study to assess the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management among post- operative valve replacement clients at selected hospital, Secunderabad, Telangana."** and this study was corrected and edited by me.

Yours faithfully,

[signature]

Mrs. Renuka Jennifer,

HOD Commercial and Computer Practice,

M.A English & (Ph. D),

Kamala Nehru Polytechnic for Women,

Hyderabad.

ANNEXURE – IX

PARTICIPANTS ACCEPTANCE FORM

Dear Participant,

I am MS. T. JANET SHUSHUNOVA studying in II year M.Sc nursing at Eashwari Bai Memorial College of Nursing, Secunderabad, Telangana. I have taken up "**A study to assess the effectiveness of planned teaching programme on knowledge regarding selected aspects of home care management among post-operative valve replacement clients at selected hospital, Secunderabad, Telangana"** as a partial fulfilment of the requirement for master of nursing degree from DR. NTR University of Health Sciences, Vijayawada. This helps in improving the knowledge of patients on home care management after valve replacement surgery.

Hope you will co-operate with me for the same

I request you to answer all the given questions with most appropriate responses with regard to your situation. Kindly do not leave any question unattended. All the information given will be kept confidential.

Yours faithfully

T. Janet Shushunova

CONSENT FORM

I _____ here with give my consent for the above said study knowing that all the information given by me would be treated with utmost confidentiality by the investigator.

Signature of the respondent

Name

Address

ANNEXURE - X

STRUCTURED KNOWLEDGE QUESTIONNAIRE TOOL
QUESTIONNAIRE ON HOME CARE MANAGEMENT AFTER VALVE REPLACEMENT SURGERY

The structured knowledge questionnaire is developed to assess the knowledge on home management of patients after valve replacement surgery in selected hospitals

The structure of questionnaire consists of part A and part B

PART A: Background variables

PART B: Knowledge on home management of patients after valve replacement surgery. It is further divided into the following sections

Section 1: General knowledge regarding Valvular Heart Disease

Section 2: Home Management after Valve Replacement Surgery (discharge teaching, self care and follow up) through personal hygiene, weights and strain, exercises, diet, drug therapy, cardiac rehabilitation and follow ups
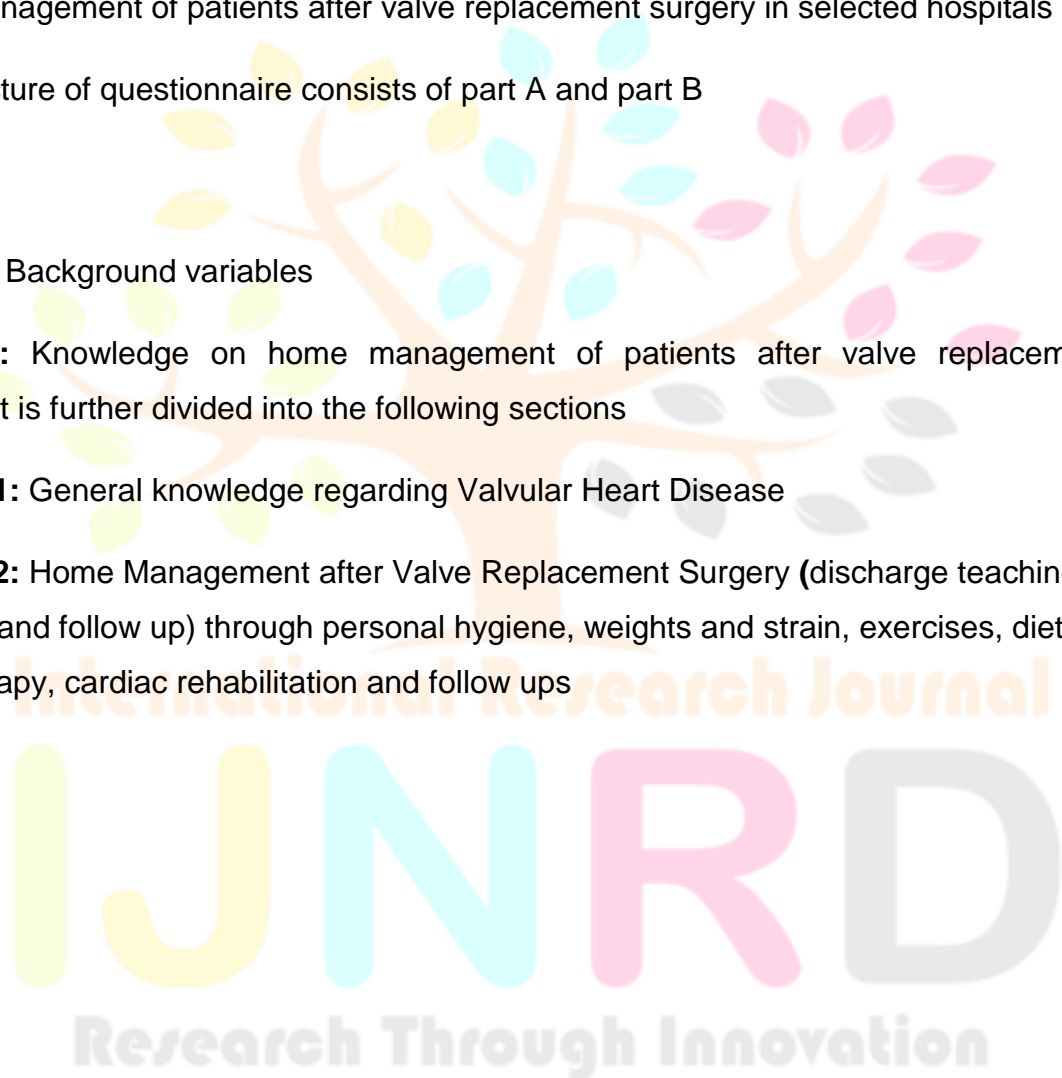
PART – A

Instructions:

Dear participants, following are some personal questions which I would like to ask you. Your answer will be kept confidential. Please place a tick mark ( ) against the appropriate column

PARTICIPANT NO:

BACKGROUND VARIABLES

1. Age in years   (   )
   a) 30 – 39 years
   b) 40 – 49 years
   c) 50 – 59 years
   d) 60 years and above

2. Gender: (   )
   a) Male
   b) Female

3. Education qualification: (   )
   a) Primary school
   b) High school
   c) Intermediate
   d) Graduate and above

4. Occupational status: (   )
   a) Employed
   b) Unemployed
   c) Business
   d) Retired

5. Monthly family income: (   )
   a) 5000 – 7000 rs/month
   b) 8000 – 10,000 rs/month
   c) 11,000 – 13,000 rs/month

    d) 14,000 – 17,000 rs /month

6. Type of family: (   )

    a) Nuclear family

    b) Joint family

    c) Extended family

    d) Blended family

7. Marital status: (   )

    a) Married

    b) Unmarried

    c) Any other

8. Family history of valvular heart disease: (   )

    a) Yes

    b) No

9. Personal habits: (   )

    a) Alcohol consumption

    b) Smoking

    c) Tobacco chewing

    d) None
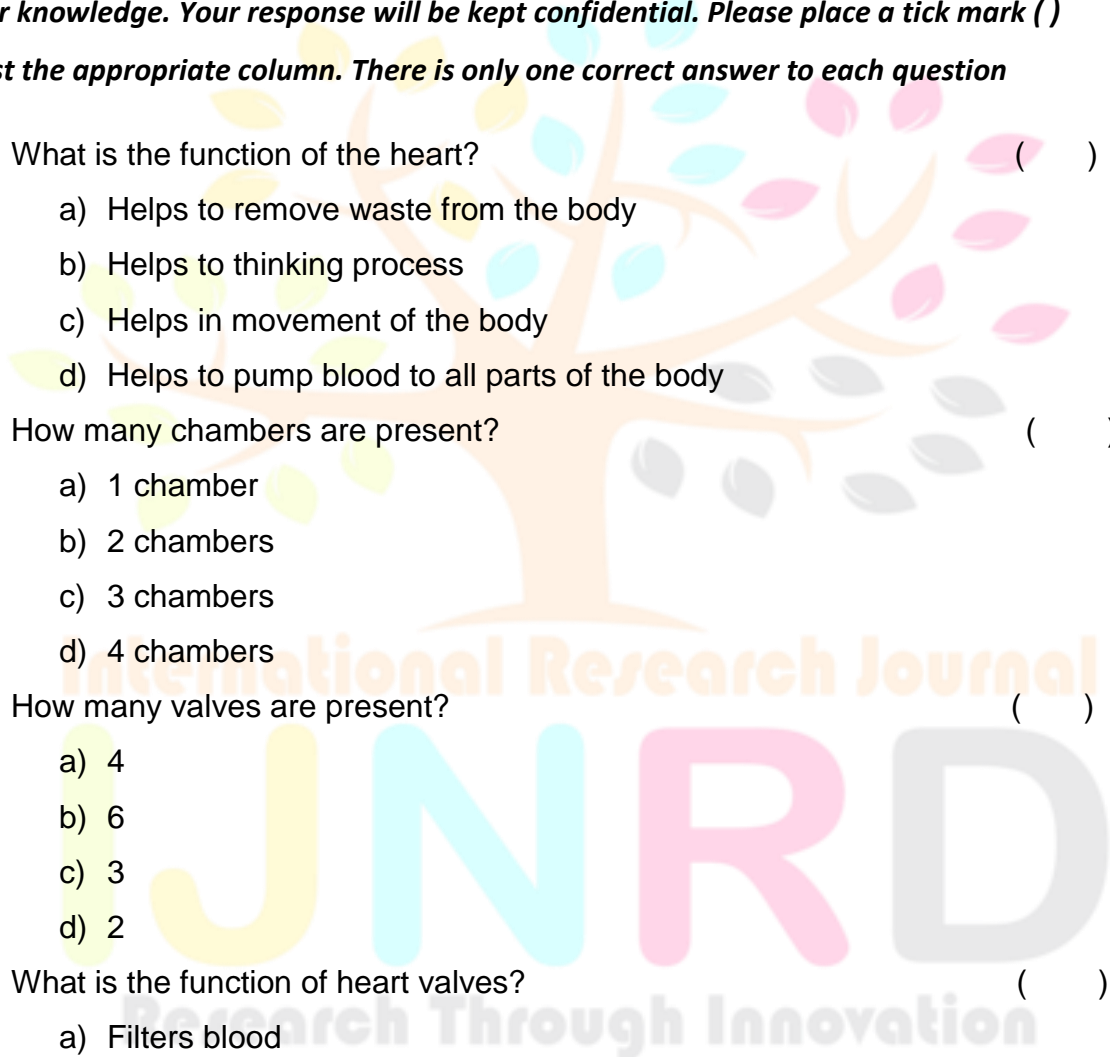
PART – B

SECTION – 1

GENERAL KNOWLEDGE REGARDING VALVULAR HEART DISEASE

Instructions:

Dear participants, please read the following questions carefully and answer them to the best of your knowledge. Your response will be kept confidential. Please place a tick mark ( ) against the appropriate column. There is only one correct answer to each question

1. What is the function of the heart?   (   )
   a) Helps to remove waste from the body
   b) Helps to thinking process
   c) Helps in movement of the body
   d) Helps to pump blood to all parts of the body

2. How many chambers are present?   (   )
   a) 1 chamber
   b) 2 chambers
   c) 3 chambers
   d) 4 chambers

3. How many valves are present?   (   )
   a) 4
   b) 6
   c) 3
   d) 2

4. What is the function of heart valves?   (   )
   a) Filters blood
   b) Controls flow of blood from one chamber to other
   c) Stores blood
   d) Allows blood to flow backwards
   e)

5. What is the meaning of valvular heart disease? (   )
   a) Blockage of blood vessels
   b) Widening of the valves
   c) Heart valves gets narrowed
   d) Sudden storage of blood flo

6. In what age group occurrence of valvular heart disease is prevalent? (   )
   a) Between 20 – 25 years
   b) Between 35 – 50 years
   c) Between 50 – 65 years
   d) Above 65 years

7. Which of the following is the major cause of valvular heart disease? (   )
   a) Heart attack
   b) Kidney disease
   c) Decreased blood pressure
   d) Dehydration

8. Which of the following is a risk factor of valvular heart disease? (   )
   a) Intake of low fat diet
   b) After dental procedures
   c) Intake of high protein diet
   d) Intake of high carbohydrate diet

9. Which of the following occurs when valves get narrowed? (   )
   a) Blood flows continuously
   b) Blood gets thickened
   c) Blood flow through the heart is restricted
   d) Blood gets clotted

10. What are the symptoms of valvular heart disease? (   )
    a) Increased intake
    b) Headache
    c) Weight loss
    d) Shortness of breath

11. What type of test is performed for valvular diseases? (   )

a) ECHO

b) CT scan

c) Ultrasound

d) Sputum test

12. What is the purpose of ECG?   (   )

a) To measure blood flow of heart

b) To measure the electrical activity of heart

c) To know the structure of heart

d) To know the size of the hear

13. What is the action of Warfarin?   (   )

a) Helps blood to flow faster

b) Helps blood to flow slowly

c) Acts on liver and makes blood thin

d) Acts on liver and makes blood thick

14. What protocol is followed before the operation?   (   )

a) Full bladder

b) Not taking any medicines

c) Taking full meals before the surgery

d) Nothing per oral before the day of surgery

15. What are the primary goals of valvular heart surgery? (   )

a) Repair and replace heart valves

b) To transplant heart

c) To replace blood vessels

d) None of the above

16. How many months will it take time to heal after surgery? (   )

a) 6 months

b) 2 – 3 months

c) Less than 6 months

d) 1 month

17. What is the complication of valvular heart disease? (   )

a) Fever

b) Diarrhea

c) Heart attack

d) Breathlessness

18. What are the contra-indication for valvular heart surgery?   (   )

    a) Vomiting and nausea

    b) Dehydration and weakness

    c) Headache and giddiness

    d) Allergic reaction and asthma

Section – II

HOME MANAGEMENT AFTER VALVE REPLACEMENT SURGERY

(DISCHARGE TEACHING, SELF CARE AND FOLLOWUP)

PERSONAL HYGIENE:

19. How to take care of surgical site?   (   )

    a) Apply betadine solution

    b) Apply hydrogen peroxide

    c) Apply cream

    d) Apply powder

20. When should bath be taken after surgery?   (   )

    a) After 2 days

    b) Immediately after discharge

    c) After 1 week

    d) After one month

21. What type of brush is recommended to be used?   (   )

    a) Diamond shape tooth brush

b) Conventional tooth brush

c) Soft tooth brush

d) Hard tooth brush

22. When all dental checkups should be done?   (   )

    a) 2 months

    b) 4 months

    c) 8 months

    d) 6 months

EXERCISES:

23. Which type of activity is recommended for early recovery?   (   )

    a) Walking

    b) Driving

    c) swimming

    d) Aerobic exercises

24. What type of exercises are taught in hospital when stayed after

   surgery?   (   )

    a) Physiotherapy

    b) Deep breathing exercises

    c) Abdomen exercises

    d) Leg exercises

WEIGHTS AND STRAIN:

25. What is the restricted weight to be lifted?   (   )

    a) 1 kg

    b) $1\frac{1}{2}$ kg

    c) 2 kg

    d) More than 3 kg

26. How many months heavy weight should not be lifted?   (   )

    a) 2 – 3 months

b) 4 – 5 months

c) 6 – 7 months

d) 8 – 9 months

DIET:

27. What type of diet is recommended on valvular diseases after valve replacement surgery?   (   )

    a) Increase protein intake

    b) Increase water intake

    c) Decrease fat diet

    d) Decrease calcium diet

28. Which of the following diet to be increased after valve replacement surgery?   (   )

    a) Fat

    b) calories

    c) Sugar

    d) Salt

29. What should be completely avoided after valve replacement surgery? (   )

    a) Milk

    b) Cool drinks

    c) Smoking

    d) Ice creams

CARDIAC REHABILITATION:

30. Why cardiac rehabilitation is strictly recommended after surgery?   (   )

    a) To strengthen and prevent heart diseases

    b) To increase stress management

    c) Excessive exercise

    d) To reduce weakness

31. What is the main purpose for cardiac rehabilitation?   (   )

    a) Heavy exercises

b) Attain activities of daily living

c) Diversion

d) Music therapy

DRUG THERAPY:

32. Why antibiotics are given?   (   )

   a) Increase immunity

   b) Removes weakness

   c) Prevents infection

   d) Faster recovery

33. Why blood thinners are given?   (   )

   a) To thicken blood

   b) To increase blood pressure

   c) To increase blood sugar

   d) To prevent blood clots from obstructing the valves

34. What is the main reason for giving blood pressure medicines? (   )

   a) Lowers blood pressure

   b) Promotes blood circulation

   c) Prevents blood clot

   d) Causes high blood pressure

35. For how many days blood thinners are given?   (   )

   a) Life long

   b) 3 months

   c) 6 months

   d) 1 year

FOLLOWUP:

36. Which of the following signs, need to be informed to the doctor? (   )

   a) Wound area is painful and red

b) Lethargy

c) Dry skin

d) Cough

37. What type of injections should never be taken?   (   )

    a) Intravenous

    b) Intramuscular

    c) Intradermal

    d) Subcutaneous

38. Till when travelling should not be encouraged?   (   )

    a) 2 – 4 weeks

    b) 5 – 7 weeks

    c) 1 month

    d) More than 2 months

39. How long driving should be avoided after surgery?   (   )

    a) 2 – 4 weeks

    b) 4 – 6 weeks

    c) 6 – 8 weeks

    d) 8 – 10 weeks

40. What type of games should be avoided?   (   )

    a) Chess

    b) Badminton

    c) Cricket

    d) Tennis

← THANK YOU →

ANNEXURE – XI TOOL QUESTIONNAIRE IN TELUGU TRANSLATION

హోం కేర్ మేనేజ్ మెంట్ నిర్మాణాత్మక జ్ఞానం ప్రశ్న సాధనం ప్రశ్న కవాటానస్ నో సర్జరో తర్వాత

నిర్మాణాత్మక జ్ఞానం ప్రశ్నాపత్రం ఎంపిక ఆసుపత్రులలో కవాటానస్ నో శస్త్రచికిత్స తర్వాత రోగుల గృహ నిర్వహణ పై జ్ఞానాన్ని అంచనా అభివృద్ధి ప్రశ్నాపత్రం యొక్క నిర్మాణంలో భాగంగా A మరియు B పార్ట్ కలిగి

పార్ట్ A: నేపధ్యం వేరియబుల్స్

భాగం B: కవాటానస్ నో శస్త్రచికిత్స తర్వాత రోగుల గృహ నిర్వహణ పై నాలెడ్జ్. ఇది మరింత ఈ క్రింది విభాగాలుగా విభజించబడింది

విభాగం 1: జనరల్ జ్ఞానం గురించి నరములకు సంబంధించిన గుండె జబ్బు

విభాగం 2: వ్యక్తిగత పరిశుభ్రత, తూనికలు మరియు పోడన, వ్యాయామాలు, ఆహారం, ఔషధ చికిత్స, గుండెకు సంబంధించిన కోలుకునే మరియు అప్ లను అనుసరించండి ద్వారా వాల్వ్ మార్పిడి శస్త్రచికిత్స (ఉత్సర్గ బోధన, స్వీయ సంరక్షణ మరియు అనుసరణ) తర్వాత హోమ్ మేనేజ్ మెంట్

భాగం – ఏ

సూచనలు:
సర్వేలో పాల్గొనేవారిని క్రింది మమ్మల్ని కాన్స్ ని వ్యక్తిగత ప్రశ్నలు అడుగుతాను .మీరు ఇచ్చే సమాధానాలు రహస్యంగా ఉంచబడతాయి. తగిన కాలం కొ ఎదురుగా టిక్ మార్క్) (చేయండి
పాల్గొనే ఏ:

వ్యక్తిగత నేపధ్యం:

1. వయసు సంవత్సరాలలో   (   )
ఎ)30 - 39 సంవత్సరాలు

బి) (40 - 49 సంవత్సరాలు

సి) (50 - 59 సంవత్సరాలు

డి) (60 సంవత్సరాలు మరియు ప్సైన

2. లింగము :   (   )

ఎ) (పురుష

బి) (స్త్రీ

3. విద్య అర్హతలు :   (   )

ఎ) (ప్రాథమిక పాఠశాల

బి) (ఉన్నత పాఠశాల

సి) (ఇంటర్ మీడియట్

డి) (గ్రాడ్యుయేట్ మరియు ప్సైన

4. వృత్తి స్థితి :   (   )

ఎ) (ఉద్యోగి

బి) (నిరుద్యోగి

సి) (వ్యాపారం

డి) (రిటైర్డ్ ఉద్యోగి

5. నెలసరి కుటుంబం ఆదాయం:   (   )

ఎ)5000 - 7000 రూపాయలు ప్రతి నెల

బి) (8000 - 10,000 రూపాయలు ప్రతి నెల

సి) (11,000 - 13,000 రూపాయలు ప్రతి నెల

డి) (14,000 - 17,000 రూపాయలు ప్రతి నెల

6. కుటుంబం రకం :   (   )

ఎ) (విడి కుటుంబం

బి) (ఉమ్మడి కుటుంబం

సి) (ఉమ్మడి కుటుంబాలు

డి) (సమ్మిళిత కుటుంబం

7. వైవాహిక స్థితి :   (   )

ఎ) (వివాహితులు

బి) (అవివాహితులు

సి) (ఏదైనా ఇతర

8. నరములకు సంబంధించిన గుండె జబ్బు యొక్క కుటుంబ చరిత్ర :   (   )

ఎ) (కలదు

బి) లేదు

9. వ్యక్తిగత అలవాట్లు :   (   )
ఎ) మద్యపాన సేవనం
బి) ధూమపానం
గ్ రా) పొగాకు నమలడం
డి) మాదక ద్రవ్యాల వ్యసనం

భాగం – బి
సెక్షన్ – I

నరములకు సంబంధించిన గుండె జబ్బు యొక్క జనరల్ నాలెడ్జ్
సూచనలు:

ఈ సర్వేలో పాల్గొనేవారు జాగ్రత్తగా కిందిది ప్రశ్నలు చదివి
సమాధానం ఇవ్వగలరు .మీ స్పందన రహస్యముగా ఉంచబడుతుంది .దయచేసి
తగిన కాలమ్ కు ఎదురుగా టిక్ మార్క్) (చేయగలరు .అక్కడ ప్రతి ప్రశ్నకు
ఒకే ఒక సర్వైన సమాధానం ఉంది

1. గుండె యొక్క కర్తవ్యం ఏమిటి?   (   )
ఎ) శరీరం నుండి వ్యర్థం తొలగించడానికి సహాయపడుతుంది
బి) ఆలోచన ప్రకర్రియకు సహాయపడుతుంది
సి) శరీరం యొక్క కదలికకు పనికివస్తుంది
డి) అన్ని శరీర భాగాలకు రక్తం సరఫరా చేయడానికి సహాయపడుతుంది

2. ఎన్ని గదులు ఉన్నాయి?   (   )
ఎ) 1 గది
బి) 2 గదులు
సి) 3 గదులు
డి) 4 గదులు

3. ఎన్ని కవాటాలు ఉన్నాయి?   (   )
ఎ) 4
బి) 6
సి) 3
డి) 2

4. గుండె కవాటాల కర్తవ్యం ఏమిటి?   (   )

ఎ (రక్త వడపోతలు

బి (ఒక గది నుండి మరో గదికి రక్త ప్రవహాన్ని నియంత్రిస్తుంది

సి (రక్తాన్ని నిలువ చేస్తుంది

డి (రక్తాన్ని వెనుకకు ప్రవహించేలా అనుమతిస్తుంది

5. నరములకు సంబంధించిన గుండె జబ్బు)వాల్ మలార్ హార్ట డిసిస్ యొక్క అర్థం ఏమిటి?　　　　(　)

ఎ (గుండె కవాటాలు కుదించుకుపోవడం

బి (కవాటాలు విస్తరించుకుపోవడం

సి (రక్త నాళాల ప్రతిష్టంభన

డి (రక్త ప్రవాహం ఆకస్మిక నిల్వ

6. నరములకు సంబంధించిన గుండె జబ్బు ఏ వయస్సులలో ప్రబలంగా వచ్చే అవకాశం ఉంది　　　　　(　)

ఎ (20 - 25 సంవత్సరాల మధ్య

బి (35 - 50 సంవత్సరాల మధ్య

సి (50 - 65 సంవత్సరాల మధ్య

డి (65 సంవత్సరాల పైన

7. నరములకు సంబంధించిన గుండె జబ్బు యొక్క ప్రధాన కారణం ఏది?　　　(　)

ఎ (కొడిస్‌ల్ వ్ య్యాది

బి (గుండెపోటు

సి (అల్ప రక్తపోటు

డి (నిర్ జలీకరణము

8. నరములకు సంబంధించిన గుండె జబ్బు యొక్క ముఖ్య ప్రమాద కారి ఏది? (　)

ఎ (తక్కువ కొవ్వుమ ఆహారం తీసుకోవడం

బి (దంత వ్యాది యం/విధానాల తరువాత

సి (అధిక ప్రొటీన్ ఆహారం తీసుకోవడం

డి (అధిక కార్ బోహైడ్ రేట్ గల ఆహారం తీసుకోవడం

9. కవాటాలు కుంచించుకుపోయినప్పుడు కొంది వాటిలో ఏది జరుగుతుంది?　(　)

ఎ (రక్తం నిరంతరం ప్రవహిస్తుంది

బి (రక్తం చిక్కబడుతుంది

సి (గుండె ద్వారా రక్త ప్రవాహం పరిమితం చేయబడుతుంది

డి (రక్తం గడ్డకట్టుకుపోతుంది

10. నరములకు సంబంధించిన గుండె జబ్బు యొక్క లక్షణాలు ఏమిటి?　　(　)

ఎ (శ్వాసకోశియలలో సమస్యలు

బి (అధిక ఆహారం తీసుకోవడం

సి (తలనొప్పి

డి (శరీర బరువు కోల్పోవడం

11. నరములకు సంబంధించిన గుండె వ్యాధులకు ఏ రకం పరీక్ష చేస్తారు?   (   )

ఎ (ECHO

బి (CT స్కాన్

సి (అల్ట్రాసౌండ్

డి (కఫం పరీక్ష

12. ECG యొక్క ప్రయోజనం ఏమిటి?   (   )

ఎ (గుండె యొక్క రక్త ప్రవాహం కొలవడానికి

బి (గుండె యొక్క నిర్మాణం తెలుసుకోవడానికి

సి (గుండె యొక్క పనితనం వల్ల ఉత్పత్తి అయ్యే విద్యుత్ కొలవడానికి

డి (ఎసిడిటి యొక్క పరిమాణం తెలుసుకోవడానికి

13. వార్ఫరిన్ యొక్క చర్యలు ఏమిటి?   (   )

ఎ (కాలేయం మీద పనిచేస్తూ రక్తాన్ని పలుచన చేస్తుంది

బి (కాలేయం మీద పనిచేస్తూ రక్తాన్ని మందపాటి చేస్తుంది

సి (రక్తం వేగంగా ప్రవహించేందుకు సహాయపడుతుంది

డి (రక్తం నెమ్మదిగా ప్రవహించేందుకు సహాయపడుతుంది

14. ఆపరేషన్ ముందు, తరువాత అనుసరించాల్సిన ప్రోటోకాల్ ఏమిటి? ( )

ఎ (శస్త్రచికిత్స రోజు ముందు మాత్రం తప్ప వేరే ఏమీ లేదు

బి (పూర్తి మూత్రాశయం

సి (ఏ మందులు తీసుకోవద్దు

డి (శస్త్రచికిత్సకు ముందు పూర్తి భోజనం తీసుకొనవచ్చు

15. నరములకు సంబంధించిన గుండె శస్త్రచికిత్స యొక్క ప్రధానిక లక్ష్యాలు ఏమిటి?   (   )

ఎ (గుండె మార్పిడి

బి (రక్త నాళాల మార్పిడి

సి (గుండె కవాటాల మరమ్మత్తు మరియు మార్పిడి

డి (ప్రైవేట్ కామ

16. శస్త్రచికిత్స తర్వాత నయం కావడానికి ఎన్నో నెలల సమయం పడుతుందో?
(   )

ఏ (2 - 3 నెలలు

బి (6 నెలల

సి (6 నెలల కంటే తక్కువ

డి (1 నెల

17. నరములకు సంబంధించిన గుండె జబ్బు యొక్క ఉపద్రవాలు ఏమిటి?   (   )

ఏ (జ్వరం

బి (గుండెపోటు

సి (వొరేచనాలు

డి (శ్వాస ఆడకపోవటం

18. నరములకు సంబంధించిన గుండె శస్త్రచికిత్సకు ప్రతికూల-సూచన ఏమిట? ( )

ఏ (వాంతులు

బి (నోరి జలోకిరణము

సి (తలనొప్పి

డి (అలర్జీ మరియు ఆస్తమా

సెక్షన్ - II

కవాట మార్పిడి శస్త్రచికిత్స తర్వాత ఆరోగ్య నిర్వహణ

(ఉత్సర్గ శిక్షణ, స్వీయ రక్షణ మరియు అనుసరణ

వ్యక్తిగత పరిశుభ్రత:

19. శస్త్రచికిత్స ప్రదేశం యొక్క శరద్ధ ఎలా వహించాలి?   (   )

ఏ (బెటడీన్ సొల్యూషన్ హాయడం

బి (హైడ్రోజిన్ పెరాక్స్నైడ్ తో శుభ్ర పర్చు

సి (క్రోమ్ హాయటం

డి (పౌడర్ వేయడం

20. శస్త్ర రచికిత్స తర్వాత స్నానం ఎప్పుడు చేయవచ్చు?   (   )
ఎ (2 రోజుల తరువాత
బి (ఆసుపత్రి నుంచి డిస్ చార్జ్ అయిన వెంటనే
సి (ఒక వారం తర్వాత
డి (ఒక నెల తరువాత

21. ఏ రకం బ్రష్ ఉపయోగించడానికి సిఫార్సు చేయవచ్చు? (   )
ఎ (సాఫ్ట్ పంటి బ్రష్
బి (హార్డ్ పంటి బ్రష్
సి (డ్మైమండ్ ఆకారం పంటి బ్రష్
డి (సాంప్రదాయక పంటి బ్రష్

22. అన్నో దంత పరీక్షలు ఎప్పుడు చేయాలి? (   )
ఎ (4 నెలలు
బి (6 నెలలు
సి (8 నెలలు
డి (2 నెలలు

వ్యాయామాలు:

23. ఏ రకమైన దినచర్య సత్వర రికవరో కోసం సూచించవచ్చు? (   )
ఎ (స్విమ్మింగ్
బి (డ్రైవింగ్
సి (వాకింగ్
డి (ఏరోబిక్ వ్యాయామాలు

24. శస్త్ర రచికిత్స తర్వాత ఆసుపత్రిలో బస చేసినప్పుడు ఏ రకం
వ్యాయామాలు నేర్పుతారు?   (   )
ఎ (ఫిజియోథెరపి
బి (ఉదర సంబంధిత వ్యాయామాలు
సి (కాళ్ళకు సంబంధించిన వ్యాయామాలు
డి (ధీర్ఘ శ్వాస వ్యాయామాలు

బరువులు మరియు అధిక శ్రమ:

25. ఎంత పరిమిత బరువ లోపవచ్చు?   (   )

ఎ (1 కిలో

బి (1.5 కిలో

సి (2 కిలోలు

డి (3 కిలోల కంటే ఎక్కువ

26. ఎన్నో నెలలు అధిక బరువులు ఎత్తతరాదు?   (   )

ఎ (2 - 3 నెలలు

బి (4 - 5 నెలలు

సి (6 - 7 నెలలు

డి (8 - 9 నెలలు

ఆహారం:

27. ఏ రకం ఆహారం నరముల వ్యాయధుల శస్త్ర రచికితోత్స తర్వాత కవాటానికి మద్దతిస్తుంది?   (

ఎ (నీరు ఎక్కువ తీసుకోవడం ద్వారా

బి (ప్రోటీన్స్ ఎక్కువ తీసుకోవడం ద్వారా

సి (క్రొవ్వ ఆహారం తగ్గించడం ద్వారా

డి (కాల్షియంతో కూడిన ఆహారం తగ్గించడం ద్వారా

28. కవాట శస్త్ర రచికితోత్స తర్వాత ఆహారంలో యేం పెంచాలి? (   )

ఎ (క్రొవ్వ

బి (షుగర్

సి (కేలరీలు

డి (ఉప్పు

29. కవాట శస్త్ర రచికితోత్స తర్వాత పూర్తిగా ఆహారంలో వేటిని నివారించాలి?   (   )

ఎ (పాలు

బి (కూల్ డ్రింక్స్

సి (ఐస్ క్రీములు

డి (ధూమపానం

గుండె కోలుకునేందుకు సంబంధించిన చర్యలు:

30. శస్త్రచికిత్స తర్వాత గుండె కోలుకునేందుకు సంబంధించిన చర్యలు ఏ విధంగా తోడ్పడుతాయి?
ఎ) గుండె బలోపేతం చేయడంతో పాటు గుండె వ్యాధులు నిరోధించడానికి
బి) ఒత్తిడి నిర్వహణ పెంచడానికి
సి) అధికంగా వ్యాయామం
డి) బలహీనత తగ్గించడానికి

31. గుండెకు కోలుకునేందుకు సంబంధించిన చర్యల ప్రధాన ప్రయోజనం ఏమిటి? ( )
ఎ) భారీ వ్యాయామాలు
బి) రోజువారీ చర్యల సాధనకు
సి) మళ్లీ లింపు
డి) సంగీత చికిత్స

ఔషధ చికిత్స:

32. ఎందుకు యాంటీబయాటిక్స్ ఇస్తారు? ( )
ఎ) రోగనిరోధక శక్తి పెంచేందుకు
బి) బలహీనత తొలగిస్తుంది
సి) ఇన్ఫెక్షన్ నివారించేందుకు
డి) వేగంగా రికవరీ కోసం

33. రక్తాన్ని పలచన చేసే ఔషధాలు ఎందుకు ఇస్తారు? ( )
ఎ) కవాటాలలో రక్తం గడ్డకట్టడం నివారించడానికి
బి) రక్తాన్ని చిక్కగా చేసేందుకు
సి) రక్తపోటు పెంచడానికి
డి) రక్తంలో చక్కెర శాతం పెంచడానికి

34. రక్తపోటు మందులు ఇవ్వడం యొక్క ప్రధాన కారణం ఏమిటి? ( )
ఎ) రక్త ప్రసరణ పెంపొందించేందుకు
బి) రక్తం గడ్డకట్టకుండ నిరోధించేందుకు
సి) అధిక రక్తపోటు కలిగించేందుకు
డి) రక్తపోటు తగ్గించేందుకు

35. రక్తాన్ని పలచన చేసే మందులు ఎన్ని రోజులు ఇవ్వబడుతుంది? ( )

ఎ (మూర్తో జీవ్ త కాలం

బి (3 నెలలు

సి (6 నెలలు

డి (1 సంవత్ సరం

అనుసరణ:

36. కొంది ఏ సంకేతాలు కనబడినప్ పుడు డాక్ టర్ కు సమాచారం ఇవ్ వాల్ సిన అవసరం ఉంటుంది?   (   )

ఎ (నిద్ రమత్ తు

బి (ప్గౌడి చర్ మం

సి (గాయపు ప్ రాంతం ఎరుపుగా మారి, నొప్ పి కలిగిస్ తున్ నప్ పుడు

డి (దగ్ గు

37. ఏ రకం ఇంజక్ షన్ స్ తీసుకోకూడదు?   (   )

ఎ (ఇంట్ రావీనస్

బి (చర్ మము లోపల

సి (సబ్ క్ యుటనేనియస్

డి (ఇంట్ రామస్ క్ యులార్

38. ప్ రయాణాలను ఎన్ నిరోజుల వరకు ప్ రోత్ సహించంచరాదు?(   )

ఎ (2 - 4 వారాలు

బి (5 - 7 వారాల

సి (1 నెల

డి (2 నెలల కంటే ఎక్ కువ

39. శస్ త్ రచికిత్ స తర్ వాత ఎంత కాలం డ్ రనైవింగ్ నిరోధించాలి? (   )

ఎ (2 - 4 వారాలు

బి (4 - 6 వారాలు

సి (6 - 8 వారాలు

డి (8 - 10 వారాలు

40. ఏ రకమ్నైన క్ రీడలు నివారించాలి?   (   )

ఎ (చదరంగం

బి (బ్ యాడ్ మింటన్

సి (టెన్ నిస్

డి) (క్రొరికొట్

41. ఎంత తరచుగా ఆసుపత్రొనొ సంప్రతించాల్సొన అవసరం ఉంటుంది?   (   )
ఎ) (ప్రతొ 6 వారాలకొొకసారొ
బొ) (ప్రతొ వారం
సొ) (6 నొలలకొొకసారొ
డి) (సంవత్సరానొకొొకసారొ

ANNEXURE - XII

CRITERIALS FOR VALIDATION OF THE TOOL

INSTRUCTIONS:

Please review the items in the tool and give your valuable suggestion regarding accuracy, relevance and appropriateness of the content. Kindly place a tick mark (✓) in the appropriate column. If there are any suggestions or comments please mention in the remark column as follows.

QUESTION NO	RELEVANT	NOT RELEVANT	REMARKS

PART – A

BACKGROUND VARIABLES

QUESTION NO	RELEVANT	NOT RELEVANT	REMARKS
1.			
2.			
3.			
4.			

5.			
6.			
7.			
8.			
9.			

STRUCTURED KNOWLEDGE QUESTIONNAIRE

QUESTION NO	RELEVANT	NOT RELEVANT	REMARKS
1.			
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SCORING KEY OF STRUCTURED KNOWLEDGE QUESTIONNAIRE

QUESTION NUMBER	KEY
1)	D
2)	D
3)	A
4)	B
5)	C
6)	B
7)	A
8)	B
9)	C
10)	D
11)	A
12)	B
13)	C
14)	D
15)	A
16)	B
17)	C
18)	D
19)	A
20)	B
21)	C
22)	D
23)	A
24)	B
25)	A
26)	B
27)	A
28)	B
29)	C
30)	A

31)	B
32)	C
33)	D
34)	A
35)	A
36)	A
37)	B
38)	A
39)	B
40)	C

ANNEXURE - XIII

PTP

ON

HOME CARE MANAGEMENT

AFTER VALVE REPLACEMENT

Name of the student: Ms. T. Janet Shushunova (ID – 300049)

Group: Post-Operative Valve Replacement Clients

No. of Samples: 40

Place: Sunshine Hospital

Time:

Duration: 1 hour

Method of Teaching: Lecture, Discussion, Explanation

Use of AV Aids: OHP, Charts, Flash cards, LCD

OBJECTIVES

GENERAL OBJECTIVES:

After giving Planned Teaching Programme (PTP), the group will be able to describe care of clients after valve replacement surgery

SPECIFIC OBJECTIVES:
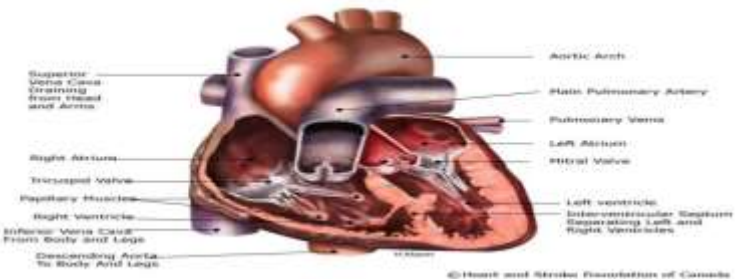
- to introduce the topic
- to discuss about the anatomy and physiology of heart
- to describe the function of heart
- to define the valve replacement surgery
- to list the risk factors of valve replacement surgery
- to explain the valve replacement procedure
- to enumerate about the minimal invasive valve repair
- to brief out the non-surgical valve repair
- to describe the valve replacement
- to discuss in detail minimally invasive valve replacement surgery
- to explain the non-surgical valve replacement
- to enumerate the home care management after discharge
- to list the precautions to be followed after valve replacement surgery
- to list the symptoms to contact the physician immediately
- to explain the self care emergency needs
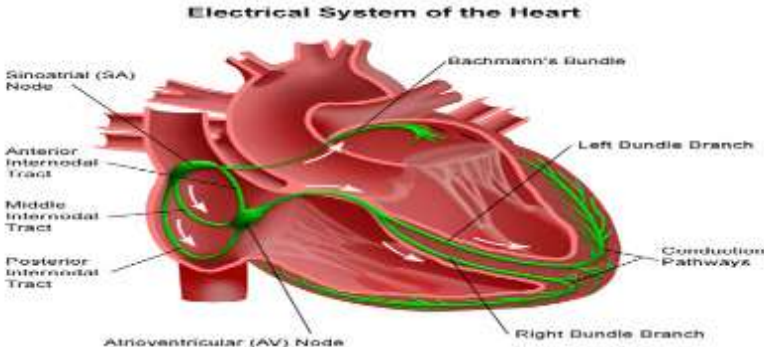
- to summarize and conclude the topic

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
1.	To introduce the topic	2 min	**HOME CARE MANAGEMENT AFTER VALVE REPLACEMENT SURGERY** **INTRODUCTION:** The introduction of valve replacement surgery in the early 1960s has dramatically improved the outcome of patients with valvular heart disease. Approximately 90,000 valve substitutes are now implanted in the United States and 280,000 worldwide each year; approximately half are mechanical valves and half are bioprosthetic valves. Despite the marked improvements in prosthetic valve design and surgical procedures over the past decades, valve replacement does not provide a definitive cure to the patient. Instead, native valve disease is traded for "prosthetic valve disease," and the outcome of patients undergoing valve replacement is affected by prosthetic valve hemodynamics, durability, and thrombo-genicity. Nonetheless, many of the prosthesis-related complications can be prevented or their impact minimized through optimal prosthesis selection in the individual patient and careful medical management, follow-up after implantation.		E X P L A N A T I O N	L I S T E N I N G	

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
2.	To discuss the anatomy and physio-logy of heart	5min	**ANATOMY AND PHYSIOLOGY OF THE HEART** A normal heart is a strong muscular pump. It weighs between 200 and 425 g (7 and 15 oz) and is a little larger than the size of your fist. During an average lifetime, the human heart will beat more than 2.5 billion times. The average heart beats about 100,000 times each day and pumps about 7,200 litres (1,900 gallons) of blood. Your heart sits between your lungs in the middle of your chest, behind and slightly to the left of your breastbone. A double-layered membrane called the pericardium surrounds your heart like a sac. Blood loaded with oxygen comes from your lungs and enters your heart. To function, your heart needs a continuous supply of oxygen and nutrients, which it gets from the blood that is pumped through the coronary arteries.	Chart	EXPLANATION	LISTENING	Discuss the anatomy and physiology of heart?

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
3.	To describe the functions of heart	2min	**FUNCTIONS:** Your heart and circulatory system make up your cardiovascular system. Your heart pumps blood to the organs, tissues, and cells of your body, delivering oxygen and nutrients to every cell and removing carbon dioxide and waste products made by those cells. Oxygen-rich blood is carried from your heart to the rest of your body through a complex network of arteries, arterioles and capillaries. Oxygen-poor blood is carried back to your heart through veins.	OHP	E X P L A N A T I O N	D I S C U S S I O N	Describe the functions of heart?
4.	To brief out the working pattern of heart	10 min	**WORKING PATTERN:** Your heart is a pump with four chambers. The upper chambers are called the left and right atria, and the lower ones are the left and right ventricles. A wall of muscle called the septum separates the left and right atria and the left and right ventricles.	Chart			Brief out the working pattern of heart?

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
			The left ventricle is the largest and strongest chamber in your heart. It can push blood through the aortic valve and into your entire body. The right two chambers of your heart (right atrium and right ventricle) pump blood from the heart to the lungs, so blood cells can pick up a fresh load of oxygen in exchange for the waste they've collected during their trip around the body. The oxygen-rich blood returns to the left chambers of the heart (left atrium and left ventricle), which then pump it around the rest of the body.				
S.			CONTENT	AV			

NO				AIDS	TEACHING	LEARNING	
	OBJECTIVE	TIME			METHOD	ACTIVITIES	EVALUATION
			As the heart muscle relaxes, the two top chambers (the atria) fill with blood. Then, these chambers contract, squeezing blood down into the ventricles. The ventricles then contract, sending blood flowing out of the heart either to the lungs or through the body. **DURING A HEARTBEAT:** Electrical System of the Heart				
S.NO			CONTENT	AV AIDS	TEACHING	LEARNING	
					METHOD	ACTIVITIES	

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
			In a normal heart, the electrical impulse that starts the heartbeat begins in a group of cells called the sinus node (or the SA node for short), in the right atrium. The SA node is often called the pacemaker of the heart. It works something like the spark plug in a car engine, producing the electrical signals that make the heart pump. The SA node generates a number of signals each minute in response to the body's needs. The resting heart rate is usually about 60 to 80 beats per minute. After a burst of electricity is generated, it spreads out through the top half of the heart (the atria), almost like ripples spreading out from a stone dropped into a pond. This signal makes the upper chambers or atria contract. As they do, the blood inside them is squeezed out into the lower chambers of the heart – the ventricles.				

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
			Meanwhile the electrical signal that made the atria contract has reached the AV (atrio-ventricular) node, in the lower part of the right atrium. The AV node is the electrical connection between the atria and the ventricles. It holds the electrical signal for a moment, like a relay station, so the blood from the atria can be pumped into the ventricles. Then, it sends the signal to the lower chambers of the heart, making them contract. As the ventricles contract, they send blood pumping out with great force. The electrical signal has now passed through the upper and lower chambers of the heart, making them contract. This is one heartbeat. This electrical activity produces electrical waves that can be measured using a heart test called an electrocardiogram (ECG or EKG).				

5.	OBJECTIVE	TIME	**VALVE REPLACEMENT SURGERY** **DEFINITION:** Heart valve surgery or other procedures are performed to repair or replace a valve in the heart that is not working properly. There are four valves in the heart: • Tricuspid • Pulmonary • Mitral • Aortic Valves control the flow of blood by making it move in one direction through the different chambers or parts of the heart. If a valve is not working correctly, blood flow is impaired. For example, if a valve does not close properly, blood may leak between the chambers or flow backwards, a condition known as valve regurgitation, insufficiency, or	OHP	E X P L A N A T I O N	L I S T E N I N G	EVALUATION
	To define valve replace-ment surgery	3 min					Define the valve replacement surgery?
S. NO				AV AIDS		LEARNING	
			CONTENT	*TEACHING METHOD*		*ACTIVITIES*	
			incompetence. If a valve is narrowed (also called stenosed),				

S. NO	OBJECTIVE	TIME		AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
			blood flow through the heart may be restricted. If the valve problem is minor, it may be treated with medication. But if the heart valve damage is severe, a procedure may be required to repair or replace the malfunctioning valve. Valve repair or replacement may be required if a valve has been damaged by: • Infection (endocarditis) • Rheumatic heart disease. • Congenital heart defect. • Mitral and/or aortic valve disease. • Normal aging and wear.				
6.			**CONTENT** **RISK FACTORS:** ▪ As with any surgery, the risk for blood clot formation	OHP	E X	Listening	

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
7.	To list the risk factors of valve replace-ment surgery	2 min	can show up a few days after surgery. If the clots dislodge, they can travel to the lungs where they cause shortness of breath, chest pain, and even death. ▪ If you notice any of these symptoms, call your doctor immediately. ▪ For a variety of reasons, your new heart valve may not function as needed. This is very rare but may require further surgery to treat. ▪ Abnormal heartbeats, called arrhythmias, can happen after surgery. Often, these can be controlled with medication and are usually temporary. **PROCEDURES:** There are a number of procedures for repairing or replacing valves. Surgery is commonly required, although there are some newer, non-surgical procedures.	Flash cards	P L A N A T I O N	Discuss	List the risk factors of valve replacement surgery?
8	To discuss about proce-dures	6 min	**VALVE REPAIR SURGICAL:** • A commissurotomy is surgery to open up valves that have thickened and are perhaps stuck together. The valve is opened by cutting the points where the leaflets	LCD	E X P	L I S	Discuss about the procedure? *EVALUATION*

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
	To explain valve repair	3 min	of the valve meet. Commissurotomy is a type of valvuloplasty or valve re-shaping. • Annuloplasty is a technique to repair an enlarged annulus, a ring of fibrous tissue at the base of the heart valve. To repair the annulus, sutures are sewn around the ring to make the opening smaller. Alternatively, a ring-like device is attached around the outside of the valve opening. • The ring provides support to the valve so it can close more tightly. • A surgeon may reshape a valve by cutting out a section or sections of a leaflet and then sewing the leaflet back together. • Decalcification is surgery to remove calcium build up from the leaflets. **CONTENT** • Valves are supported by cords (called chordae tendineae) and papillary muscles. If these are stretched or weak, the valve may not close properly. By replacing or shortening the cords, the valve will be strengthened	LCD	L A N A T I O N / E X P L	T E N I N G / L I S T	Explain valve repair surgery?

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
9.			and able to close properly. • If there are holes or tears in the leaflets of the valve, a surgeon may repair them with a tissue patch. **MINIMALLY INVASIVE VALVE REPAIR:** Unlike conventional surgery, minimally invasive surgery does not involve sawing through the breastbone and opening the chest. The surgeon watches the heart on a video screen and operates using long-handled surgical tools inserted through small incisions. In some cases, robotic arms are used. Minimally invasive valve repair is only available in some hospitals. It is also referred to as endoscopic or robotic heart surgery.	LCD	A N A T I O N	E N I N G	Enumerate the invasive valve repair?
10.	To enume-rate the invasive valve repair	3min	*CONTENT* **NON-SURGICAL VALVE REPAIR:** • Percutaneous or catheter-based procedures are done without any incisions in the chest or stopping the heart. Instead, a thin flexible tube called a catheter is inserted into a blood vessel in the groin or the arm and then	LCD	E X P L A	L I S T E	*EVALUATION*

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
	To brief out the non surgical valve repair	3 min	threaded up into the interior of the heart. • Percutaneous or balloon valvuloplasty is used in people with stiffened or narrowed (stenosed) pulmonary, mitral or aortic valves (more commonly for the mitral than the aortic valve). A balloon tip on the end of the catheter is positioned in the narrowed valve and inflated to enlarge the opening or to crack open calcified tissue. • Several methods of percutaneous mitral valve repair are being developed. • These procedures are still in the developmental phase and are available in a limited number of centres. • One example is edge-to-edge repair, which can be used in the case of a very leaky mitral valve in a patient		N A T I O N	N I N G	Brief out the non surgical repair?
			who is considered high risk for a surgical repair or replacement. A delivery catheter holding a clip is advanced through the femoral vein from the groin into the left side of the heart, under general anesthesia. The clip is positioned beyond the leaky valve in an open position and then pulled back so that it catches the		D		

11.	**OBJECTIVE**	**TIME**	flaps of mitral valve. Once closed, the clip holds the leaflets together and stops the valve from leaking. **VALVE REPLACEMENT:** Replacement is more commonly used to treat aortic valves or severely damaged mitral valves. There are two kinds of valves that are used for valve replacement and you should talk with your doctor about which type is best for you • **Mechanical valves** are made from durable metals, carbon, ceramics and plastics. A fabric sewing ring is used to attach the valve to the tissues in the patient's	LCD AV AIDS	E X P L A N A T I O N *TEACHING* *METHOD*	I S C U S S I O N *LEARNING* *ACTIVITIES*	
S. **NO**							
	To describe valve replace-ment	7min	heart. The major advantage is durability. However, blood thinners must be taken the rest of the patient's ***CONTENT*** life to prevent blood clots. The valve makes a soft clicking sound when it floats shut, which may bother some patients. People generally adjust quickly to this sound . • **Biological valves** are made from: ➢ Animal tissue, either an actual pig valve or a				Describe valve replace-ment ? *EVALUATION*

S.N O	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
			bovine pericardial engineered valve (a xenograph).				
			➢ Human tissue of a donated heart (an allograft or homograft), used most often to replace infected valves.				
			➢ A patient's own tissues (an autograft). A Ross Procedure (also called a Switch Procedure) involves taking the patient's normally functioning pulmonary valve and using it to replace a diseased aortic valve.				
			➢ The pulmonary valve is then replaced with a donated (homograft) pulmonary valve.				
			CONTENT				
12.			Biological valves are not as durable as mechanical valves and may need to be replaced between 5 and 15 years. Patients with biological valves will need to take blood thinners in the short term. **MINIMALLY INVASIVE VALVE REPLACEMENT SURGERY:** In minimally invasive valve surgery, long-handled tools are inserted into the chest through four or more small incisions.	LCD	E X P L A N	L I S T E	EVALUATION

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
13.			While watching a video monitor, the surgeon manipulates the tools and conducts the surgery. In some cases, robotic arms may be used to manipulate the tools for the surgeon. Only some hospitals can offer minimally invasive valve surgery. This type of surgery is sometimes referred to as endoscopic or robotic heart surgery.	LCD			
	To discuss	2 min	**NON-SURGICAL VALVE REPLACEMENT:** Percutaneous valve replacement is a non-surgical approach to valve replacement that uses long, flexible tubes called catheters. Instead of opening the chest to operate on the				Discuss invasive valve replacement surgery?
14.	about minimallyi nvasive valve replace- ment surgery		heart, a catheter is inserted into an artery (usually in the groin or arm) and threaded through the blood vessels into the heart. Percutaneous valve replacement does not require stopping the heart or the use of a heart-lung machine.	Chart	Explain	Listening	
	To explain non-	3min	**PRECAUTIONS:** Usually, valve surgery is scheduled ahead of time. Approximately a week before your surgery, you may be asked to visit your hospital's preadmission unit. Blood and urine				Explain non-surgical valve replace ment? *EVALUATION*

S.NO	OBJECTIVE	TIME		AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	
	surgical valve replace-ment		tests, an electrocardiogram, and an X-ray may be performed in preparation for your surgery. Your doctor will explain the risks and benefits of the procedure and you will be asked to sign a consent form. Please inform your doctor if you: ▪ Have ever had a reaction to any contrast dye, iodine, or any serious allergic reaction (for example, from a bee sting or from eating shellfish).				List down
	To list down the precau-tions of valve surgery	5 min	▪ Have asthma. ▪ Are allergic to any medication. **CONTENT** ▪ Have any bleeding problems or are taking blood-thinning medication. ▪ Have a history of kidney problems or diabetes. ▪ Have body piercings on your chest or abdomen. ◆ Have had any recent change in your health. ◆ Are, or may be, pregnant. Most patients are admitted to the hospital the day before their procedure. The night before, you will be asked to bathe to cleanse or disinfect your skin. At the hospital, the area to be operated on will be washed, scrubbed with an				the precautions to be followed? *EVALUATION*

S. NO	OBJECTIVE	TIME		AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	
			antiseptic cleanser and if necessary, the hair on your chest will be clipped. Valve surgery is conducted under general anesthetic so you will be asleep throughout the procedure. To reduce the risk of vomiting while asleep, you will be asked not to eat or drink after midnight the night before surgery. If you smoke, you should stop at least 2 weeks before surgery, as smoking can contribute to blood clotting and breathing problems. **CONTENT** The heart must be stopped so the surgeons can work on the valve or valves. To ensure your body continues to receive a flow of oxygen-rich blood, you will be hooked up to a heart-lung machine. This machine takes over the pumping action of the heart. The surgery can take anywhere from 2 to 4 hours, depending upon the number of valves that need to be repaired or replaced. When you wake up, you will be in the recovery room or an intensive care unit (ICU). You can expect to stay in the hospital for about a week. How quickly you recover from surgery will depend in large part upon how				EVALUATION

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
			healthy you were before the surgery. If you have minimally invasive surgery, your hospital stay will probably be shorter and your recovery quicker. When you return home, keep an eye on your incisions. Some bruising is normal, but contact your doctor if you experience increased pain, redness, swelling, bleeding or other draining from an incision, fever, chills or generally feeling unwell.				
15.			**CONTENT** **HOME CARE MANAGEMENT** **MEDICINES:** ▪ **Anti-Platelets** help prevent blood clots. This medicine makes it more likely for you to bleed or bruise. ▪ **Blood Thinners** help prevent blood clots. Examples of blood thinners include heparin and warfarin. Clots can cause strokes, heart attacks, and death. The following are general safety guidelines to follow while you are taking a blood thinner: ☞ Watch for bleeding and bruising while you take blood thinners. Watch for bleeding from your gums or nose. Watch for blood in your urine and	PPT	E X P L A N A T I	L I S T E N I N G	EVALUATION

S. NO	OBJECTIVE	TIME		AV AIDS	ON TEACHING METHOD	LEARNING ACTIVITIES	
	To enume-rate the home managem ent	10 min	bowel movements. Use a soft washcloth on your skin, and a soft toothbrush to brush your teeth. ☝ This can keep your skin and gums from bleeding. If you shave, use an electric shaver. Do not play contact sports. ☝ Tell your dentist and other healthcare providers that you take anticoagulants. **CONTENT** ☝ Wear a bracelet or necklace that says you take this medicine. ☝ Do not start or stop any medicines unless your healthcare provider tells you to. Many medicines cannot be used with blood thinners. ☝ Tell your healthcare provider right away if you forget to take the medicine, or if you take too much. ▪ **Warfarin** is a blood thinner that you may need to take. The following are things you should be aware of if you take warfarin.				Enumerate the home manage-ment? EVALUATION

S. NO	OBJECTIVE	TIME		AV AIDS	LEEARNIN METHOD	LEARNING ACTIVITIES	
			✎ Foods and medicines can affect the amount of warfarin in your blood. Do not make major changes to your diet while you take warfarin. Warfarin works best when you eat about the same amount of vitamin K every day. ✎ Vitamin K is found in green leafy vegetables and certain other foods. **CONTENT** ✎ Ask for more information about what to eat when you are taking warfarin ✎ You will need to see your healthcare provider for follow-up visits when you are on warfarin. You will need regular blood tests. These tests are used to decide how much medicine you need. ▪ **Heart Medicine:** This medicine is given to strengthen or regulate your heartbeat.It also may help your heart in other ways. Talk with your caregiver to find out what your heart medicine is and why you are taking it. ▪ **Blood Pressure Medicine:** This is given to lower your blood pressure. A controlled blood pressure helps				EVALUATION

S. NO	OBJECTIVE	TIME	protect your organs, such as your heart, lungs, brain, and kidneys. Take your blood pressure medicine exactly as directed.	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	
16.			▪ **Antibiotics:** This medicine will help kill germs that may get into your blood and cause an infection in your heart. Caregivers may tell you to take antibiotics before and after dental work, surgery, and some procedures. **CONTENT** This is important after heart valve disease. ▪ **Take your medicine as directed.** Call your healthcare provider if you think your medicine is not helping or if you have side effects. Tell him if you are allergic to any medicine. Keep a list of the medicines, vitamins, and herbs you take. Include the amounts, and when and why you take them. Bring the list or the pill bottles to follow-up visits. Carry your medicine list with you in case of an emergency. **FOLLOW UP WITH YOUR HEALTHCARE PROVIDER AS DIRECTED:**	Chart	DISCUSSIO	LISTENING	EVALUATION

S. NO	OBJECTIVE	TIME	Write down your questions so you remember to ask them during your visits.	AV AIDS	N TEACHING METHOD	LEARNING ACTIVITIES	
	To follow the steps as directed	5min	♠ **_Care For Your Wound:_** Ask caregivers how to take care of your incision wound. Check your wound, clean it, and change the bandages each day. If the bandage gets dirty or falls off, put on a new one. **CONTENT** ♠ **_Mouth Care:_** Take care of your teeth and gums. Brush and floss your teeth, and see your dentist regularly. You may help prevent an infection in your heart if you do this. Tell your dentist that you have had heart valve surgery. ♠ **_Cardiac Rehabilitation:_** Your cardiologist or heart surgeon may recommend that you attend cardiac rehabilitation (rehab). This is a program run by specialists who will help you safely strengthen your heart and prevent more heart disease. The plan includes exercise, relaxation, stress management, and heart-healthy nutrition. Caregivers will also check to make sure any medicines you are taking are working.			What steps to be followed?	
S.				AV		LEARNING	EVALUATION

NO	OBJECTIVE	TIME	The plan may also include instructions for when you can d, return to work, and do other normal daily activities.	AIDS	TEACHING METHOD	ACTIVITIES	
17.			♠ *Good Nutrition For Your Heart:* Get enough calories, protein, vitamins, and minerals to help prevent poor nutrition and muscle wasting. You may be told to eat *CONTENT* foods low in cholesterol or sodium (salt). You also may be told to limit saturated and trans fats. Do eat foods that contain healthy fats, such as walnuts, salmon, and canola and soybean oils Eat foods that help protect the heart, including plenty of fruits and vegetables, nuts, and sources of fiber. Ask what a healthy weight is for you. Set goals to reach and stay at that weight. **CONTACT YOUR PRIMARY HEALTHCARE PROVIDER IF:** ♦ You have a fever. ♦ Your wound area is painful, red, or oozing fluid. ♦ You feel too tired for normal activities weeks after your surgery. ♦ Your hands, ankles, or feet are swollen.	Chart	E X P L A N A T I O N	L I S T E N I N G	
S. NO				AV AIDS	TEACHING	LEARNING ACTIVITIES	EVALUATION

S. NO	OBJECTIVE	TIME	CONTENT	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	EVALUATION
18.	To consult the physician with what symptom	3min	• You urinate less, or not at all. • You feel tired or weak and are short of breath. • Your arm or leg feels warm, tender, and painful. It may look swollen and red. • You have questions or concerns about your condition or care. **CONTENT** **SEEK CARE IMMEDIATELY IF:** ♣ You have blood in your bowel movements or urine. ♣ You are bleeding from your nose, mouth, or incision wound. ♣ You have a severe headache. This may feel like the worst headache of your life. ♣ You have weakness or numbness in your arm, leg, or face. This may happen on only 1 side of your body. ♣ You feel lightheaded, dizzy, or sick to your stomach. You may have cold sweats and bluish skin, lips, or nail beds. ♣ You have trouble breathing or are coughing up blood. You may have more pain when you take deep breaths or cough.	PPT	EXPLANATION METHOD	DISCUSSION	When to consult the physician during which symptoms?

19.	OBJECTIVE	TIME	♣ You have chest pain, or discomfort that spreads to your arms, jaw, or back, or sudden back pain. ♣ You are confused or have problems speaking or understanding speech. You have vision changes or loss of vision.				When to seek the medical care?
	To seek medical care imme-diately	3min					
20.			**CONTENT** **SUMMARY:** Valve surgery has evolved from a standard approach towards the minimally invasive approach. Both repair and replacement can be performed safe with increased patient satisfaction and decreased hospital costs. This approach is expected to extend from specialized centers to other surgical centers once surgeon gains experience by training at specialized centers and will be of particular importance of patients with heart failure who are far less able to tolerate the rigors and routine valve replacement surgery				
S. NO			**CONCLUSION:**	AV AIDS	TEACHING METHOD	LEARNING ACTIVITIES	
			The recommendations for valvular heart surgery and replacement made anticipation that the prognosis with surgery				EVALUATION

OBJECTIVE	TIME				
		will be better than without surgery. In the majority of patients, improvements is achieved. However, an occasion an unsatisfactory result will occur. The causes of unsatisfactory			
To summa - rize the topic	2min	results after valve replacement can be related to complications occurring during valve replacement, valve			
		CONTENT			
		substitute dysfunction after surgery, another valve diseases that was mild at operation and has worsened, associated coronary artery disease and other heart disease. Any and all of these can result in mortality after valvular surgery. With careful postoperative care these adverse outcomes can be anticipated.			
To conclude the topic	2min				
					EVALUATION

	OBJECTIVE	TIME					

PLANNED TEACHING

PROGRAMME

ON

HOME CARE MANAGEMENT

VALVE REPLACEMENT SURGERY
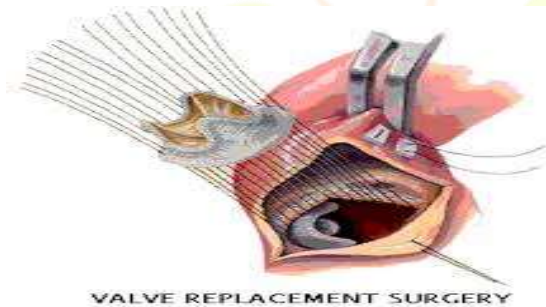
VALVULAR HEART DISEASE:

Valvular Heart Disease is a condition where one or more valves in the heart do not function properly

ETIOLOGY AND RISK FACTORS:

- Untreated strep throat that leads to Rheumatic fever
- Infection in the lining of the heart and valves called Infective Endocarditis
- Advancing age causing weakening of the valves or calcification of the valves
- Congenital heart disorders (occurring at birth)
- Coronary Artery Disease
- Myocardial Infarction or heart attack

SIGNS AND SYMPTOMS:

- Shortness of breath
- Swelling of lower extremities or abdomen
- Fast or irregular heart beat
- Wet cough
- Palpitations
- Tiredness or lethargy
- Syncope or fainting
- Light-headed or faint
- Chest pain
- Blood clots
- No symptoms at all

Mechanical valves are made of a carbon alloy and are designed to last for a very long time, often 40 – 60 years. But mechanical valves have hinges like doors and these need oiling to keep the moving softly. The oil in this case is patients own blood, and this thinned by using a tablet called Warfarin/acitrom

Biological valves on the other hand are taken from animals and treated with special medicines to be able to use in humans. These valves don not need warfarin or blood thinning

WARFARIN/ ACITROM:

Warfarin/ acitrom acts on the liver and makes blood thin. Therefore if a normal person bleeds for one minute, patient with acitrom will bleed for 2 – 3 minutes. The activity of the medicine is measured with a number called INR. This number is a comparison between a normal person and person taking the medicine. So, INR 2 means the patients blood in twice as thin as a normal person

For each kind of mechanical valve, the INR requires varies. The normal valves are communicated to you by your doctor and noted at the beginning of this book. Warfarin is also given to patients who have irregular heart rate (atrial fibrillation), or who have clots in their leg

veins (DVT) or to anyone who is at risk of forming blood clots

PRECAUTIONS TO BE TAKEN WHILE TAKING WARFARIN:

- Basically, warfarin will make you bleed easily. So avoid all jobs that can cause injury. Jobs like working with sharp tools, machinery etc. do not engage in any sport, like cricket, rugby etc, that can cause injuries

- Warfarin should be taken every day at a fixed time (**Ex:** 6pm). The dose of the drug will be determined by your doctor. The dose alters from patient to patient and is defined individually by testing INR valves at regular intervals. Depending on INR value, the dose is changed by your doctor. The dose can vary with the kind of diet you take

AFTER VALVE REPLACEMENT SURGERY:

Some procedures can cause infection into blood circulation and settle on the valve leading to severe infection of the valve. Following valve replacement, here are some precautions to be taken

POST DISCHARGE PRECAUTIONS:

- **Maintain Personal Hygiene:** Immediately after discharge, get a shower. Dry your wound, apply Betadine solution and leave it open. In case of discharge from the wound, contact your doctor immediately to avoid infection of the valve

- **Exercise Regularly:** Walk for about 1 km in the morning and evening this ensures faster recovery. Also, engage in some form of breathing exercises regularly, as shown to you during your hospital stay. But do not over exert yourself

- **Avoid Weights and Strain:** The operated chest bone takes some time to heal. And so, for 2 – 3 months, don not lift weights weighing over 3 kgs, including shopping bags. Also, avoid bending and any activity that causes pain in chest bone

GENERAL PRECAUTIONS TO BE TAKEN AFTER VALVE REPLACEMENT:

- Regular dental check up (every 6 months)
- If any infection or dental caries, they must be treated immediately by consulting a dentist
- Before dental treatment or cleaning, you may need antibiotics – inform your dentist about your valve replacement

- Antibiotics must be given before small surgical procedures like urinary catheterization, small operations
- No need to take antibiotics for procedures like given blood samples or checking blood glucose with finger prick
- If any cold or cough persists for more than 4 – 5 days, consult a doctor
- When taking other medications (antibiotics), ensure that they do not interact with warfarin
- When in doubt, always ask your cardiologist

FOOD THAT REDUCES WARFARIN EFFECT:

Warfarin interference with action of vitamin k for its effects. Therefore foods rich in vitamin k reduce the action of warfarin. Some of such foods are:

- Legumes (beans), pulses
- Leafy vegetables – spinach, lettuce, fenugreek (methi) etc
- Broccoli, cabbage, cauliflower
- Egg yellow, liver of animals
- Soya oil, olive oil
- Colas, coffee, tea, hot chocolate and drinks that have caffeine

It does not mean to completely avoid the above foods. The food should be planned in such a way that these vegetables are taken in a limit quantity and the same quantity at the same time and regularly. This helps in adjusting dosage of warfarin accordingly

COMPLICATIONS:

★ Allergic reaction to medications

★ Blood loss requiring transfusion with its low risk of disease transmission

★ Heart attack, strokes, kidney failure, pneumonia, bladder infections

★ Complications from incision site such as infection or nerve damage

★ Serious medical problems can lead to ongoing health concerns, prolonged hospitalization, or rarely death

DO'S	DON'T'S
1. Do take the exact dose of warfarin/ acitrom as decided by your doctor 2. Do take the medicine at the same time	1. Don't change or stop taking your medications without informing your doctor 2. Don't change the

everyday (6 pm) 3. Do inform doctor about any new medications that you are taking 4. Do inform your doctor if you have any other diseases with bleeding tendencies (bleeding from nose, bleeding from intestine, high blood pressure) 5. Do consult doctor when taking intramuscular injections 6. Do avoid working with sharp objects as you may get injured or cut and may need to visit a nearby	dose 3. Don't consume alcohol as it will interfere with the drugs action 4. Don't consume cranberry juice 5. Don't consume foods with rich in vitamin k at a constant amount and regularly, high intake can make the tablet less affective 6. Don't change food habits after dose is fixed

hospital	7. Don't share medicine with others
7. Do consult your doctor if your are planning pregnancy or already pregnant because the drug will affect the baby	
8. Do get your blood tests at regular interval as suggested by your doctor	
9. Do keep yourself clean and hygienic	

Stay Positive

Health is not just the absence of a disease. It's an inner joyfulness that should be ours all the time; a state of positive well-being.

Above All

Good habits are worth being fanatical about

ప్రణాళిక బోధనా
కార్యక్రమం

VALVE REPLACEMENT SURGERY

హోం కేర్ మేనేజ్మెంట్ ప్లె
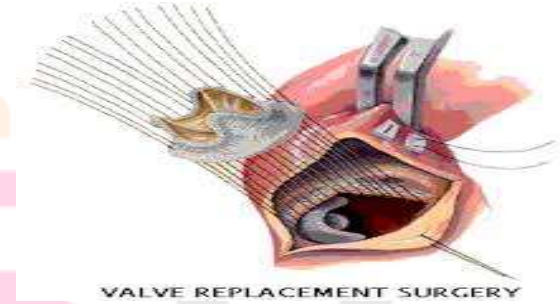
నరములకు సంబంధించిన గుండె జబ్బు:

♣ గుండెలో ఒకటి లేదా మరిన్ని కవాటాలు సక్రమంగా
పనిచేయని ఒక స్థితిని నరములకు సంబంధించిన గుండె
జబ్బు అంటారు .

కారణశాస్త్రం మరియు హాని కారకాలు :

- ♣ స్ట్రెప్ గొంతు ఇబ్బందికి చికిత్స తీసుకోకపోతే అది రుమాటిక్ జ్వరానికి దారితీస్తుంది.
- ♣ గుండె పొరలల్లో మరియు కవాటాలల్లో వచ్చే ఇన్ఫెక్టివ్ ఎండోకార్డిటిస్ అనే ఇన్ఫెక్షన్.
- ♣ వయస్సు వల్ల వచ్చే కవాటాలు బలహీనపడటం లేదా కవాటాలు కాల్సిఫికేషన్ చేరుకుంటునన్నందు వల్ల.
- ♣ జన్మసిద్ధ గుండె లోపాలు (పుట్టుకతో) (సంభవించేవి
- ♣ కరోనరీ ఆర్టరీ డిసీజ్
- ♣ మయోకార్డియల్ ఇంఫార్క్షన్ లేదా గుండెపోటు

సూచనలు మరియు లక్షణాలు:

- ♣ శ్వాసకార్యలలో సమస్యలు
- ♣ అంత్య లేదా ఉదరం యొక్క వాపు
- ♣ అతి వేగంగా లేదా అస్తవ్యస్థంగా గుండె కొట్టుకోవడం
- ♣ తడి దగ్గు
- ♣ దడ
- ♣ అలసట లేదా బద్ధకం
- ♣ మూర్చ లేదా మూర్చ లక్షణాలు
- ♣ తల తిప్పడం
- ♣ ఛాతీ నొప్పి
- ♣ రక్తం గడ్డకట్టడం
- ♣ అస్సలు ఏ లక్షణాలు లేకపోవడం.

మెకానికల్ కవాటాలు కార్బన్ మిశ్రమంతో తయారు చేస్తారు మరియు చాలా కాలం మన్నేలా అవి రూపొందించబడ్డాయి. సార్లు కానసి 40-60 సంవత్సరాల దాకా నిలుస్తాయి. తలుపులు కవాటాలు మెకానికల్ కానసి.

అవసరమైతే కదిలేందుకు మాత్రం తగా మరియు ఉంటాయి కలిగి ఈ అవసరముంటుంది. వేయాలసిన చమురును సందర్భంలో రోగుల రక్తమే చమురుగా పనిచేస్తుంది, మరియు ఈ చమురుని వార్ఫరిన్ టాబ్లెట్ అనే అస్టరాం / పలచపరుచవచ్చు ఉపయోగించి.

మరోవైపు మానవులలో ఉపయోగించడానికి జంతువుల నుండి జీవ కవాటాలు తీసి ప్రత్యేక మందులు తో చికిత్స చేస్తారు రక్త లేదా వార్ఫరిన్ కవాటాలకు ఈ . పలుచబరచడం అవసరం లేదు .

గడ్డకట్టతో ప్రమాదమున్న వారికికి వార్ ఫరిన్ ఇవ్వబడుతుంది.

వార్ ఫరిన్ :అసిట్ రోం /

వార్ ఫరిన్ పనిచేస్తుంది మీద కాలేయం అసిట్ రోం / సాధారణ ఒక .చేస్తుంది పలుచన రక్తాన్నో మరియు రక్తం నిమిషం ఒక గాయమ్మైనప్పుడూ వ్యక్తికి కారుతుంది, అదో అసిట్ రోం రోగికి 2- 3 నిమిషాల రక్తస్రావం అమతుంది యొక్క ఔషధం .కార్ యకలాపాలను ఐ సాధారణ ఒక .కాలుస్తారు సంఖ్యతో అనో ఆర్.ఎన్. మధ్య వ్యక్తి తీసుకుంటున్న ఔషధం మరియు వ్యక్తికి -ఆర్.ఎన్.ఐ కాబట్టి .ఉంటుంది పోలిక సంఖ్య ఈ2 అంటే ఒక సాధారణ వ్యక్తి కంటే రౌండు రెట్లు పలుచగా ఉండో రోగుల రక్తమని అర్ధం.

ప్రతి మెకానికల్ వాల్వ్ యొక్క ఇ.ఎన్ మారవలసిన ఆర్. తాలియజేసినట్ లుగా మీకు వ్నైదే యుడు మో.ఉంటుంది రంఅవస ప్రారంభంలో పుస్తకం ఈ సమాచారం కవాటాల సాధారణ గుండౌ అస్తవ్యస్థంగా సాధారణంగా .సూచించబడినది సోరలలో కాలు లేదా రోగులకు కలిగిన (దడ కర్ణికి) రేటు రక్తం లేదా వారికి గడ్డకట్టిన రక్తం (డివిటి)

వార్ ఫరిన్ తీసుకుంటున్నప్పుడు తీసుకోవలసిన జాగ్రత్తలు:

- సాధారణంగా, వార్ ఫరిన్ సులభంగా రక్తస్రావం చేస్తుంది కాబట్టి గాయం కలిగించు అన్నో పనులను నివారించాలి.యంత్ర రాలతో తో టూల్స్ పదున్నైన .ఉద్యోగాలు ఉండే పని, క్రికెట్, రగ్ బీ వంటి గాయాలు కలిగించు క్రీడలను కూడా నివారిస్తే మంచిది.
- వార్ ఫరిన్ ప్రతి రోజు ఒక స్థిర సమయంలో తీసుకోవాలి .సా :ఉదా)6 గం మంది తీసుకోవల్సిన .(కు. మంది .నిర్ణయిస్తారు డాక్టర్ మో మోతాదు మరియు మారుతుంది రోగికి నుండి రోగి మోతాదు వాల్ మ ఆర్.ఎన్.ఐ అంతరాలలో క్రమల పరీక్ష చేత వ్యక్తిగతంగా మోతాదును నిర్ణయిస్తారు.

మందు మో ఆధారంగా మీద విలువ ఆర్.ఎస్.ఐ .ఉండొొచ్చు మార్చుతూ వ్నైద్యుడు మో మోతాదును మోతాదు మందు కూడా ప్రకారం ఆహారం స్వీకరించే .మారుతుందో

కొలుకోవడానికి సహకరిస్తుందోఅలాగే., ఆసుపత్రిలో మోకు చూపిన విధంగా శ్వాస వ్యాయామాలు క్నొన్నొ క్రమం తప్పకుండా చేయండి, కానో అతిగా చేయవద్దు.

కవాట శస్త్రచికిత్స తర్వాత:

- క్నొన్నొ విధానాలు రక్త ప్రసరణలో ఇన్ఫెక్షన్ సంక్రమణకు కారణమమతాయి మార్పిడో కవాట . జాగ్రత్తలు క్నొన్నొ తప్పకుండా తర్వాత .తీసుకోవాలి

కవాట మర్పిడో అనంతరం జాగ్రత్తలు :

- వ్యక్తిగత పరిశుభ్రత నిర్వహించాలి: డిష్చార్జ్ అయిన తర్వాత వెంటనే స్నానం చేయండో బొటాడిన్ ఉండేలా పొడిగా గాయం మో . వదిలిపేయాలి గాజపేస్ గయాస్ని చల్లి పొడర్ అయినటు్ల్నైతో డిశ్చార్జ్ ఏద్నైనా నుంచి గాయం సంక్రమణను ఫెక్షన్ఇన్ కవాటానికి డాక్టరును మో వెంటనే నివారించేందుకు .సంప్రదించండో

అధిక బరువులు మరియు ఒత్తిడోని నివారించండోఆప :ర్షేను చేసిన ఛాతో ఎముక నయం కావడానికి క్ొంత సమయం పడుతుందో. అందువలన, కనీసం 2-3 నెలలు, షెపింగ్ బ్యాగ్స్ లాంటి వాటుితో సహా 3 కిలోలు అప్ప్నైన బరువన్న ఎలాంటి బరువులు స్న్ైతం ఎత్తకూడదుఅలాగో., ఛాతో ఎముకకు నొప్పొ కలిగించేలా వంగటం మరియు అలాంటి కార్యాచరణలనూ నివారించాలి .

ప్రతిరోజూ వ్యాయామం:

ప్రతిరోజు ఉదయం మరియు సాయంత్రం సుమారు 1 కిలోమీటరు నడవండి, అదో వేగంగా

కవాట మార్పిడి తరువాత తీసుకోవాల్సిన సాధారణ జాగ్రత్తలు :

- ♣ రెగ్యులర్ దంత పరీక్షలు ప్రతి)6 నెలలకొకసారి (
- ♣ దంత క్షయం లేదా ఏ దంత సంబంధ వ్యాధి అయినా వస్తే, దంతవైద్యున్నొ వెంటనే సంప్రదించాలి.
- ♣ దంత చికిత్స లేదా శుద్ధికి యాంటీబయాటిక్స్ వాడవలసి వస్తుంది కాబట్టి ముందే మీ కవాట మార్పిడి గురించి మీ దంతవైద్యునికి తెలియజేయండి.
- ♣ మూత్ర కాథెటరైజేషన్ మరియు చిన్న సర్జరీ వంటి చిన్న చికిత్సా ప్రక్రియలకు ముందు యాంటీబయాటిక్స్ తప్పక ఇవ్వబడుతుంది.
- ♣ రక్త గ్లూకోజ్ తనిఖీ లేదా రక్త నమూనాలను తీసుకున్నప్పుడు యాంటీబయాటిక్స్ తీసుకోవాల్సిన అవసరం లేదు.
- ♣ దగ్గు లేదా జలుబు 4-5 రోజుల కంటే ఎక్కువగా కనిపిస్తోంటే, వైద్యున్నొ సంప్రదించండి.
- ♣ ఇతర ఔషధాలు తీసుకోవాల్సి వస్తే, అవి వార్ఫరిన్ తో తలపడకుండా ఉండేలా చూడండి.
- ♣ ఎలాంటి సందేహం వచ్చినా ఎల్లప్పుడూ మీ కార్డియాలజిస్టును సంప్రదించండి.

వార్ఫరిన్ ప్రభావం తగ్గించే ఆహారం:

వార్ఫరిన్ ప్రభావాలు విటమిన్ కె యొక్క చర్యతో తగ్గించవచ్చు చర్య వార్ఫరిన్ అందువలన. ఆహారాలు ఉన్న సమృద్ధిగా కె విటమిన్ తగ్గించడానికి ఆహారాల అలాంటి. తీసుకోవాలి కొన్ని:

- ♣ చిక్ కుళ్ళు (బీన్స్), పప్పుదినుసులు.
- ♣ ఆకు కూరలు బచ్చలికూర -, పాలకూర, మెంతులు మొదలైనవి
- ♣ బ్రోకోలీ, క్యాబేజీ, కాలిఫ్లవర్
- ♣ కోడిగుడ్డు పచ్చసొన, జంతువుల కాలేయం.
- ♣ సోయా నూనె,ఆలివ్ నూనె
- ♣ కోలాలు, కాఫీ, టీ, వేడి చాక్లెట్ మరియు కాఫిన్ కలిగిన పానీయాలు.

పూర్తిగా ప్పై ఆహారాలు నివారించాలని కాదు ఆహారాన్ని. పరిమితో ఒక కూరగాయలు ఈ సమయంలో తీసుకునే, పరిమాణం ప్రకారం వాటితోపాటు తీసుకునే విధంగా వ్యాయాహరచన చేయాలి మోతాదు వార్ఫరిన్ శరీరంలో వలన చేయడం అలా. సహాయపడుతుంది సర్ దుబాటుకు.

ఇబ్బందులు:

★ మందులకు ప్రతిచర్య
★ రక్తం నష్టపోవడం వలన వ్యాధి వృద్ధి అయ్యే ప్రమాదముంటుందో తద్వారా రక్తమార్పిడి అవసరమమతుంది.
★ గుండెపోటు, మూత్రపిండాల వైఫల్యం, న్యుమోనియా, మూత్రాశయ వ్యాధులు
★ గాటు స్థైట్ నుండి ఉపద్రవాల వల్ల ఇన్ఫెక్షన్ల వల్ల నాడులకు హాని.
★ తీవ్రమైన వ్యాధ్య సమస్యలు తలెత్తితితే దీర్ఘకాలం ఆసుపత్రిలో చేరాల్సిన అవసరం రావచ్చు, మరియు అరుదుగా మరణానికి కూడా దారితీస్తుంది.

DO'S	DON'T'S

1. మీ డాక్టర్ నిర్ణయం మేరకు వార్ఫరిన్ / అస్ప్టిరిన్ యొక్క ఖచ్చితమైన మోతాదు తీసుకోవాలి	1. మీ డాక్టర్ గారికి చెప్పకుండా మీ మందులు మార్చవద్దు మరియు తీసుకోవడం ఆపకూడదు.
2. ప్రతిరోజూ నిర్ణీత సమయంలోనే ఔషధం తీసుకోవాలి (ఉదా. 6 గంటలకు)	2. మోతాదు మార్చవద్దు
3. మీరు ఏ క్రొత్త మందులు తీసుకున్నా వాటి గురించి డాక్టర్కు తెలియజేయడం మరువకండి.	3. మద్యం సేవించవద్దు, అది మందుల చర్యను ప్రభావితం చేస్తుంది.
4. మీరు రక్తస్రావంతో కూడిన ఏ ఇతర వ్యయాధులను (ముక్కు నుండి రక్తస్రావం, ప్రేగుల నుంచి రక్తస్రావం, అధిక రక్తపోటు) కలిగి ఉన్నా మీ వైద్యునికి తెలియజేయండి.	4. క్రాన్బెరీ జ్యూస్ సేవించవద్దు.
5. ఇంట్రామస్క్యులార్ సూది మందులు తీసుకోవల్సి ఉన్నప్పుడు వైద్యున్ని సంప్రదించండి.	5. అధికంగా విటమిన్ కా సమృద్ధిగా కలిగిన ఆహారాలు తినవద్దు, అధికంగా తీసుకోవడం వల్ల మందుపై అది ప్రభావం చూపవచ్చు.
6. మీరు పదున్నైన వస్తుమలతో పని తప్పించాలి, కోసుకుపోవడం గాయపడటం వంటి ప్రమాదం ఉంటుంది తద్వారా ఆస్పత్రిని సందర్శించాల్సి వస్తుంది.	6. ఔషధం మోతాదు నిర్ణయించాక ఆహార అలవాట్లను మార్చకూడదు.
7. మీకు గర్భం ప్రణాళిక ఉన్నా లేదా ఇప్పటికీ	7.ఇతరులతో వ్యాద్యం/ఔషధాలు

గర్భవతి అయిఉంటే మీ వైద్యునిని సంప్రదించడం మరువకండి ఎందుకంటే ఔషధం శిశువును ప్రభావితం చేస్తుంది.	పంచుకోవద్దు.
8. మీ డాక్టర్ సూచించిన విధంగా నిర్ణీత వ్యవధిలో రక్త పరీక్షలు చేయించుకోండి.	
9. మీరు పరిశుభ్రమైన పరిస్థితులల్లో జీవించటం అలవర్చుకోండి.	

BACKGROUND VARIABLES									
Samples	Age	Gender	Education	Occupation	Monthly Family Income	Type of Family	Marital Status	Family History of Valvular Diseases	Personal Habits
1	4	1	2	4	1	1	1	1	4
2	3	2	1	2	1	1	1	1	4
3	3	2	2	2	1	1	1	2	4
4	2	1	1	2	1	3	1	2	1
5	4	1	1	2	1	1	1	2	1
6	3	1	4	1	4	2	1	2	1
7	4	1	4	4	2	2	1	1	1
8	3	1	1	1	3	1	1	2	2
9	4	1	2	1	4	1	1	2	2
10	3	1	1	1	4	1	1	2	1
11	3	2	3	1	1	1	2	2	4
12	2	1	4	1	4	1	1	1	2
13	3	1	1	2	1	2	1	1	2
14	3	2	2	2	1	2	1	1	4
15	1	1	4	1	4	2	1	1	1
16	3	2	1	2	1	1	1	1	4
17	3	1	1	4	1	2	1	2	2
18	4	2	1	2	2	2	1	2	4
19	1	2	4	1	1	2	1	1	4
20	1	2	4	1	2	2	1	1	4
21	4	2	1	2	3	2	1	1	4
22	1	1	4	1	4	1	1	1	2
23	3	1	1	1	4	3	1	2	2

24	4	2	1	3	1	2	1	2	4
25	2	2	1	3	1	1	1	2	4
26	1	1	3	1	4	2	1	2	2
27	4	2	4	4	4	1	1	2	4
28	1	1	1	2	1	1	1	2	2
29	1	1	4	1	4	2	1	2	1
30	4	2	4	4	4	1	1	2	4
31	4	1	4	4	4	1	1	2	2
32	1	2	3	3	2	2	2	2	4
33	2	1	2	2	2	2	1	1	2
34	2	1	1	4	3	1	1	2	2
35	2	1	4	1	4	1	1	2	2
36	2	2	4	1	4	2	1	2	4
37	3	1	4	1	4	2	1	1	2
38	3	2	1	3	1	1	1	2	4
39	3	1	1	2	1	1	1	2	1
40	2	1	3	3	3	3	1	2	1

MASTER SHEET PRE - TEST SCORES

Samples	1	2	3	4	5	6	7	8	9	10	11	#	13	14	15	16	17	18	TOTAL	19	#	21	22	23	24	25	26	27	28	#	30	31	32	33	34	35	#	37	38	#	40	TOTAL	GRAND TOTAL
1	1	0	0	1	0	0	0	1	0	1	1	0	1	1	1	1	1	0	10	1	0	1	1	1	1	1	1	0	1	1	1	1	0	0	0	1	0	0	1	0	1	14	24
2	0	1	1	1	1	0	0	0	1	1	0	1	0	1	0	0	0	0	8	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	0	0	5	13
3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	7	9
4	1	1	0	0	1	1	1	1	0	0	0	1	0	1	0	1	0	0	9	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	5	14
5	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	0	1	0	1	1	0	1	9	12
6	1	1	0	1	0	0	1	1	1	0	1	1	1	1	1	0	1	0	12	0	0	1	1	0	0	1	0	1	1	1	1	1	1	0	0	1	0	1	1	0	1	13	25
7	1	0	1	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	11	1	0	1	1	1	1	1	0	0	1	1	1	0	0	1	0	1	0	1	0	1	1	14	25
8	1	1	0	1	1	0	1	0	1	1	1	0	0	1	1	1	0	0	11	1	0	1	1	1	1	1	0	1	1	1	1	0	0	0	1	0	0	1	0	1	1	14	25
9	1	0	1	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	9	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4	13
10	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	12	15
11	0	1	0	1	0	0	0	0	0	0	1	1	1	0	1	0	0	1	5	1	0	1	1	0	0	0	0	0	1	1	0	1	1	0	0	0	1	0	0	1	0	9	14
12	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0	0	1	0	9	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	7	16
13	1	1	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	6	1	0	0	1	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	6	12
14	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	5	0	1	1	1	0	0	1	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	7	12
15	1	0	0	1	0	1	0	0	0	1	1	0	1	1	0	0	1	0	8	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	1	0	1	1	0	0	13	21
16	0	0	0	1	1	0	0	0	1	0	1	1	0	0	0	1	1	0	7	1	1	1	1	0	1	0	0	1	0	0	1	1	0	0	0	0	1	1	1	1	1	14	21
17	1	1	1	1	0	0	0	0	1	1	1	1	0	1	1	1	0	0	11	0	1	1	1	1	1	1	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	12	23
18	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	8	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	5	13
19	1	1	1	1	0	0	1	0	0	1	1	0	0	0	1	0	0	0	8	1	0	1	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	0	0	0	1	14	22
20	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	0	0	0	12	0	0	1	1	1	1	0	1	1	0	0	1	1	0	0	1	0	1	1	1	1	1	14	26
21	1	1	0	1	1	0	0	1	1	1	0	0	0	0	1	0	0	0	8	1	0	1	1	1	1	0	1	0	1	1	0	0	1	0	0	1	0	0	0	0	0	11	19
22	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	12	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	15	27
23	1	1	0	1	0	0	0	0	1	1	1	1	0	0	1	0	0	0	8	0	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	8	16
24	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	16	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4	20
25	1	0	0	1	0	0	0	0	0	1	1	1	1	0	0	1	1	0	8	0	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	7	15
26	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	4	0	1	0	1	0	0	0	0	0	1	1	0	0	1	0	1	0	1	1	1	1	0	8	12
27	1	1	1	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	10	0	0	1	1	1	0	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	1	11	21
28	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	1	0	0	1	0	1	0	0	0	0	1	1	0	0	1	0	1	0	0	1	0	8	11
29	1	1	0	1	1	0	0	0	1	1	1	0	1	1	1	0	1	0	11	1	0	1	1	1	0	1	0	0	1	1	0	1	0	1	1	1	1	0	0	0	0	12	23
30	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	1	0	0	13	1	0	1	1	1	1	0	1	1	1	0	0	1	1	1	0	1	1	0	0	1	0	14	27
31	1	1	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	13	1	0	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1	0	0	0	1	14	27
32	1	1	1	1	0	1	1	0	0	1	1	1	0	1	0	0	0	0	11	1	0	1	1	1	0	1	1	1	1	0	1	1	0	0	1	1	0	0	0	0	0	13	24
33	0	0	0	0	1	0	1	0	0	1	1	0	0	1	1	0	0	1	7	1	0	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	1	0	0	0	1	15	22
34	1	0	1	1	0	1	1	0	0	1	0	1	0	0	1	0	0	1	9	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	14
35	1	1	0	1	1	0	1	0	1	1	0	1	0	1	1	1	0	0	11	0	0	1	1	1	1	0	0	1	0	1	1	1	1	1	1	0	1	0	0	0	0	12	23
36	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	0	1	0	13	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	14	27
37	1	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	5	0	1	0	1	0	0	1	0	0	0	0	1	1	0	0	1	0	1	0	1	1	1	10	15
38	1	1	1	1	1	0	1	0	1	1	1	1	0	1	0	0	0	1	12	0	1	1	1	1	0	0	1	0	1	0	1	1	1	1	0	1	0	1	0	1	0	13	25
39	0	0	0	0	1	0	0	0	0	1	0	1	1	0	1	1	1	0	7	0	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	6	13
40	1	1	0	0	0	1	1	1	0	1	1	1	0	1	1	0	1	1	12	0	1	1	1	1	1	0	0	0	1	0	1	1	0	0	1	1	1	1	0	0	1	13	25

MASTER SHEET POST - TEST SCORES

Sample	Section I																			Section II																							GRAND
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL	TOTAL
1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	1	1	1	13	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	17	30
2	0	1	0	1	1	1	0	0	1	0	1	0	0	1	1	1	1	0	10	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	18	28
3	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	17	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	18	35
4	1	1	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	1	9	0	1	0	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	1	0	1	0	14	23
5	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	12	0	0	0	0	1	1	0	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	13	25
6	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	11	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	17	28
7	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	14	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	34
8	1	1	0	0	1	0	0	0	1	1	1	0	1	0	0	1	0	1	9	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	19	28
9	1	0	0	0	0	1	1	1	1	1	1	1	0	1	0	1	1	1	12	1	1	1	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	18	30
10	0	0	0	0	1	0	1	1	1	1	0	1	0	0	1	1	1	1	10	0	1	1	1	1	1	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	0	12	22
11	1	1	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	13	1	1	1	1	1	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	17	30
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	0	1	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	17	35
13	1	1	1	1	0	0	1	1	1	1	0	1	1	0	1	0	1	1	13	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	12	25
14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	1	1	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	11	29
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	11	29
16	0	1	0	1	1	1	1	0	1	0	1	1	1	0	1	1	0	1	13	0	0	1	0	0	0	1	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	24
17	0	1	1	1	1	1	0	1	0	1	1	0	0	1	0	0	0	0	9	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	17	26
18	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	39
19	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	15	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	16	31
20	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	14	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	17	31
21	1	1	1	1	0	1	0	0	0	0	0	1	1	1	0	0	1	1	10	1	1	1	1	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	13	23
22	0	1	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	11	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	19	30
23	1	0	0	1	1	1	1	1	1	0	1	0	1	0	1	0	1	0	11	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	29
24	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	12	1	1	1	1	0	1	0	1	0	1	0	0	0	0	1	1	1	0	0	1	1	1	13	25
25	1	1	1	1	1	0	1	1	1	1	1	0	0	0	1	1	1	0	13	1	0	1	1	0	0	0	0	1	1	0	1	0	1	0	1	0	0	1	1	1	0	11	24
26	1	1	1	1	0	1	0	0	0	1	1	1	0	0	0	1	1	1	11	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	19	30
27	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	1	13	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	17	30
28	0	0	1	0	0	1	0	0	0	1	0	1	0	1	1	1	1	1	9	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	20	29
29	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	16	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	19	35
30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	18	36
31	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	16	1	1	1	1	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	16	32
32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	17	35
33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	1	1	1	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	9	27
34	0	1	0	1	0	1	0	1	1	0	1	0	1	1	1	1	1	1	11	1	1	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	18	29
35	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	17	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	14	31
36	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	38
37	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	21	39
38	0	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	21	34
39	1	1	1	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	20	33
40	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	17	35