

**A STUDY TO ASSESS THE LEARNING NEEDS OF
PATIENTS WITH HEART FAILURE ADMITTED IN
CARDIAC MEDICAL UNITS OF SCTIMST,
TRIVANDRUM.**

PROJECT REPORT

*Submitted in partial fulfillment of the requirements
for the*

Diploma in Cardiovascular and Thoracic Nursing

Submitted by

Dhanya.I.S

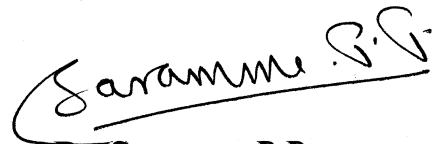
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**Sree Chitra Tirunal Institute for Medical Science and
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CERTIFICATE FROM THE SUPERVISORY GUIDE

This is to certify that Ms. Dhanya.I.S has completed the project work on **“A study to assess the learning needs of patients with heart failure admitted in Cardiac medical units of SCTIMST, Trivandrum”**, under my direct supervision and guidance for the partial fulfillment for the **“Diploma in Cardiovascular and thoracic nursing”** in the University of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. It is also certified that no part of this work report has been included in any other thesis for procuring any other degree by the candidate.



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This is to certify that the project report on “**A study to assess the learning needs of patients with heart failure admitted in Cardiac medical units of SCTIMST, Trivandrum**” is a genuine work done by me at the Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum under the guidance of **Dr. Saramma P. P.** It is also certified that this work has not been presented previously to any university for award of degree, diploma, fellowship or any other recognition.

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Ms. Dhanya. I. S

LIST OF ABBREVIATIONS

CHF – Congestive heart failure

CCU – Coronary care unit

SCTIMST – Sree Chitra Tirunal Institute For Medical
Sciences And Technology

CMWRD - Cardiac medical ward

ABSTRACT

TOPIC – A study to assess the learning needs of patients with heart failure admitted in Cardiac medical units of SCTIMST, Trivandrum.

BACKGROUND OF THE STUDY – Heart failure affects millions of people worldwide. Patient education is a vital component of nursing care of this population, with the goals of improving the heart failure patient's quality of life, minimizing symptoms and hospital admissions, and reducing length of hospital stay. Lack of knowledge about diet and medications by patients with heart failure is a major factor contributing to noncompliance with treatment regimens, and subsequent high hospital readmission rates. Teaching can prevent many of the leading causes of heart failure exacerbation. Learning needs assessment has a fundamental role in education and training.

OBJECTIVE – To assess the learning needs of patients with heart failure.

METHOD – This study was conducted in Cardiac medical units of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. Descriptive survey method was used in this study. Thirty five patients with heart failure admitted in Cardiac medical units of SCTIMST were selected for this study. A Heart failure Learning Needs Inventory given to the samples to assess their learning needs.

RESULTS – This study revealed that almost all patients were interested to know the various aspects of their disease condition but their level of interest in learning the needs of heart failure was different. Ratings across all the learning need items of patients with CHF varied from 64%-91%. The most prioritized learning need for patients with heart failure was different measures to improve the function of their heart (91%), whereas the least priority was given to the anatomy and physiology of the heart (64%).

CONCLUSION – Patient education is a vital component of heart failure management programmes. Learning needs assessment is a crucial stage in the educational process that leads to changes in practice. More effective and efficient educational intervention can be created by matching the programme to patient learning needs.

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For Medical sciences And Technology

CMWRD - Cardiac medical ward

Chapter-1

1.1 Introduction

Heart failure is a complex clinical syndrome that can result from any structural or functional cardiac disorder that impairs the ability of the ventricle to fill with or eject blood (Hunt et al.,2005). Heart failure can be systolic or diastolic, left or right sided, and acute or chronic. CHF is a clinical syndrome that can result even from several non-cardiac disorders (like anemia, thyroid disease, etc) (Angelidou, 2010).

Approximately twenty three million people worldwide are afflicted with heart failure and two million new cases of heart failure are diagnosed each year worldwide. In contrast to other cardiovascular disorders that have actually declined during the past few decades, the incidence of heart failure is on the rise. (Samir and Nour 2011).

Heart failure is the most common cause of hospitalization among adults over sixty five. Over sixty percentage of patients die within ten years of first onset of symptoms. There are a variety of factors that can contribute to the development of heart failure including long standing hypertension, diabetes, smoking, obesity, high cholesterol levels, valvular defects, coronary artery diseases and congenital heart diseases (Samir and Nour 2011).

Heart failure is a major cause of morbidity, reduced quality of life and increased health care cost. The number of persons who suffer from heart failure is expected to increase as the population ages and more people survive cardiac disease. (Samir and Nour 2011). The insufficiency of the cardiac pump leads to volume overload of either the pulmonary circulation [left- sided failure] or the systemic one [right- sided failure] and to reduce cardiac output. Signs and symptoms of left-sided heart failure include: dyspnoea, unexplained cough,

pulmonary crackles, low oxygen saturation levels, third heart sound, reduced urine output, dizziness and light headedness, confusion, fatigue and weakness. Signs and symptoms of right- sided heart failure include: lower extremity edema, liver enlargement, ascites, anorexia, abdominal pain, weight gain and weakness (Angelidou., 2010).

The natural history of CHF starts with the development of symptoms suggestive of the disease and the subsequent confirmation of the diagnosis based on clinical assessment and on a battery of laboratory and imaging studies [brain natriuretic peptide levels, chest x-ray, electrocardiogram, cardiac ultrasound etc]. Treatment with angiotensin converting enzyme inhibitors or angiotensin 2 receptor blockers, beta-blockers and diuretics along with lifestyle modifications [salt restriction, smoking cessation, exercise] is started after the diagnosis is established. A vicious cycle usually follows characterized by periods of stability alternating with periods of worsening symptoms, acute decompensation, hospitalization, and subsequent stabilization and discharge. Each time stabilization is achieved through various interventions including drug therapy modifications, more intense life style management and various surgical therapies like implantation of defibrillators and biventricular pacemakers, implantation of left ventricular assist devices or even heart transplantation. Nevertheless, the condition becomes increasingly unstable and the whole pattern of gradual decline, punctuated by episodes of acute deterioration and eventually a seemingly unexpected death or death owing to progressive heart failure characterizes the patients journey (Angelidou., 2010).

1.2 Background of the study

CHF is a major public health problem. CHF is a progressive and chronic disease that limits patient's functional status and severely lowers their quality of life. The five-year mortality rate for patients with symptomatic heart failure is almost fifty percentages, and up to forty percentage of these deaths is sudden.

CHF not only increases mortality but also has a dramatic effect on patient's functional ability and quality of life. Nearly one million patients with CHF cannot live their lives without some restriction on activity because of the signs and symptoms of heart failure. Between one third and one half of heart failure readmissions, particularly those occurring within ninety days are preventable. Factors that contribute to preventable hospitalizations are inadequate patient and caregiver education, poor symptom control, insufficient social support, and inadequate discharge planning. Successful management of people with CHF often includes long-term lifestyle adjustment by patients and families. Lifestyle adjustments focus on modification in diet and activities, adherence to a complex medication regimen, and the need to monitor symptoms. The success of lifestyle adjustments depends not only on the person with CHF but also on his or her social support (Hardin and Hussey 2003).

When a patient present with symptoms of heart failure, an initial set of assessments, lab studies, and diagnostic tests must be done in order to confirm the diagnosis. The most important piece of the patient assessment is the initial medical history and physical exam. The nurse is often the first person to obtain data from the patient about his history. It is important to gather information regarding the patients risk profile, history of cardiac events and response to previous therapies if this is not a new diagnosis. There are also many questions the nurse can ask to elicit important clinical data to help the healthcare provider determine the cause and severity of heart failure and the treatment plan for the patient. The symptoms of heart failure are often non-specific and patients exhibit a number of signs and symptoms in varying degrees. This requires appropriate training and expertise and nurses taking care of CHF patients should be able not only to assess and record their symptoms but also to understand their relevance (Angelidou., 2010).

In the early stages, patients with heart failure may have minimal physical limitations and symptoms. In the late stages, ordinary daily activities become

difficult, even at rest. Typically, the first key indicator of transition from early- to late- stage CHF is hospital admission. Unfortunately, both physical and psychosocial interventions typically become aggressive only during the last stages of heart failure, which is usually too late to significantly affect mortality. This delay of intervention is partly due to the fact that patients in early stages of CHF do not seek medical treatment until their condition requires hospitalization (Hardin and Hussey 2003).

Many patients had low levels of knowledge and lacked a clear understanding of heart failure and self-care. Educational interventions need to be designed specifically for elderly patients and need to target barriers to learning such as functional and cognitive limitations, misconceptions, low motivation and self-esteem. Health care professionals need to be skilled in assessing the requirements and level of education given to the individual.(Stromberg 2005).A clinical problem in attending to patient need is identifying which learning needs are important and realistic to learn [Wenby et al., 1999].Patient centered education must be delivered in accordance with the patients needs and perspectives is a key factor in managing chronic disease (Redman.,2005).

Patients suffering from heart failure have a higher prevalence of depression and anxiety. Many patients have a low self-esteem and perceive their care as incomprehensible. This can lead to a low motivation and interest in learning how to perform self-care. In order to identify the education that patients with chronic heart failure need and want to have about their condition, patient should be involved in the development of educational materials and models. The educational needs of patient with heart failure have been evaluated using an instrument with eight dimensions called the Heart Failure Learning Needs Inventory. Patients generally rated all items as very important and realistic to learn. The traditional model of learning assumes that education improves knowledge and that increased knowledge accomplishes a higher self-care

behavior, including improved adherence with pharmacological and non-pharmacological treatment. (Stromberg., 2005).

Learning needs assessment has a fundamental role in education and training, but care is needed to prevent it becoming a straightjacket. It is evident that the need to learn should underpin any educational system. Learning is more likely to lead to change in practice when needs assessment has been conducted, the education is linked to practice, personal incentive drives the educational effort, and there is some reinforcement of the learning. Learning needs assessment is thus crucial in the educational process. The key lesson might be for those who design new systems of education and training. Basic learning in a profession entirely on the assessment of needs is a dangerous and limiting tactic. So balance must be struck (Grant 2002).

Patients and their families should be treated as partners in learning, not as pupils. If patients feel engaged in the discussion and their learning needs are assessed, they may feel that the information is more pertinent to their situation. Plenty of time should be allowed for patients to ask questions as they digest the new information. Patients with heart failure are often discharged with complex medication regimens. Despite the best intention of the practitioners, patients understanding of reason for each medication may be low, and their ability to follow therapeutic instructions may be limited (Paul., 2008). Those information needs and skills the patient identifies as valuable and important to learn are perceived learning needs.

1.3 Need and significance of the study

Heart failure occurs in almost epidemic proportions, placing a huge burden on both the health care system, sufferers and their families. This can only rise over coming years as the ageing population, particularly in industrialized countries, increasingly suffers from heart failure and its related co-morbidities.

The care of this group of patients has evolved significantly over recent years as our knowledge and understanding of the pathophysiology of heart failure patients has developed (Beattie. 2008).

Learning needs assessment is a crucial stage in the educational process that leads to changes in practice, and has become part of government policy for continuing professional development. Exclusive reliance on formal needs assessment could render education an instrumental and narrow process rather than a creative, professional one. Different learning methods tend to suit different health professionals and different identified learning needs. Educational planning on the basis of identified needs faces real challenges in making learning appropriate to and integrated with professional style and practice. (Grant., 2002).

Teaching can prevent many of the leading causes of heart failure exacerbation. However, as hospitalization continues to shorten; nurses will be challenged to prioritize educational needs. A critical problem in attending to patient learning needs is identifying which learning needs are important to be learned. The nurse must be able to make educational decisions based on research finding and not simply personal experience (Raffi., 2009).A learning needs assessment describes the opinions of the learners regarding what information they want to learn, or what educational topics they believe are important (Carlson et al., 2001).Educational interventions that increase knowledge alone are insufficient; patients must also integrate the knowledge and tools they learn into their daily lives, and this must lead to behavior modification (Bourbeau et al., 2004).

Heart failure is a chronic condition and the need for patients care does not end with the implementation of the diagnosis and the initial treatment plan. Indeed, it is exactly at this point that the multidisciplinary heart failure team has to put a lot of effort to improve long term quality of life and prognosis of the patient. Nurses have a leading role in this phase. Treatment of heart failure can

be categorized into three basic strategies: pharmacological management, devices and surgical management, and lifestyle management. All three are very important when combined and provide the best prognosis for the patient. In both the inpatient and outpatient settings, nurses have a critical role in the individual patients treatment plan implementation (Angelidou. 2005).

In order to make the best use of teaching time, determining the learning style of patients, identifying current knowledge, and recognizing barriers to learning allows patient education to be more effective and efficient. The vast majority of patients with CHF are adult learners. Learning experiences that are mutual responsibility of learner and teacher. Self evaluation is a process evaluation that results in rediagnosis of learning needs and it enable adults to learn best. (Lile., 1999). Learning is a lifelong process of transforming information and experience into knowledge, skills, behaviors, and attitudes (Cobb., 2009).

More Indians will die from diseases of the heart and circulatory system than from any other cause. For most, the death will seem sudden, even if the person has been ill for sometime. People with advanced heart disease have episodes of serious illness, and then long periods in which nothing seems to happen. Although people may recover, they may not return to their previous level of functioning-and yet, at times, they may not seem to be very ill. SCTIMST is a tertiary hospital with 250 beds and daily many patients admitted in SCTIMST with cardiac conditions. Many patients admitted in cardiac medical units are diagnosed as heart failure due to complications of myocardial infarction, valve diseases, cardiomyopathy and congenital heart diseases. Monthly approximate 20 to 40 patients admitted in cardiac medical units of SCTIMST for management. As a part of project, SCTIMST conducting a Heart failure clinic every wednesday. The patients with heart failure lack thorough knowledge about their disease management. Identifying learning needs of heart failure patients helps to give good health education to these patients and prevent

hospital re-admissions. So it is very important to assess the learning needs of patients with heart failure in cardiac medical units of SCTIMST, Trivandrum for giving comprehensive care to these patients.

1.4 Statement of the problem

A study to assess the learning needs of patients with heart failure admitted in cardiac medical units of SCTIMST, Trivandrum.

1.5 Objective

- Assess the learning needs of patients with heart failure.

1.6 Operational definitions

Learning need - The gap between a learner's current level and some desired level of knowledge, skills, attitudes, or performance, generally stated as a problem or issue.

Patients with heart failure - Refer to the persons who are admitted in Cardiac medical units of Sree Chitra Tirunal Institute For Medical Sciences And Technology, Trivandrum with a diagnosis of heart failure.

Cardiac medical units - Cardiac medical units is the units where patients admitted for medical management.

1.7 Limitations

The study is limited to

- Patients who are willing to participate in the study.
- Patients with heart failure admitted only in cardiac medical units.
- The study area is limited to only one institute.

1.8 Study setting

Location: The cardiac medical units in SCTIMST, Trivandrum.

1.9 Study method

The study was conducted in heart failure patients who are admitted in cardiac medical units. Convenient sampling technique was used.

1.10 Sampling

Convenient sampling technique was used.

1.11 Sample size

35 patients.

1.12 Tool

In this study the investigator assessed the learning needs of patients with heart failure who were admitted in SCTIMST, Trivandrum with a self-prepared validated heart failure learning needs inventory. The learning needs inventory contains 14 items about medications, diet, physical activity and rest.

1.13 Organization

The report is organized with the introduction, background of the study, need and significance of the study, objectives, operational definitions, limitations, and methodology.

Chapter - 2

REVIEW OF LITERATURE

2.1 Introduction

Review of literature is an important aspect of any research project from beginning to end. Review of literature is the critical summary of research on a topic of interest, often prepared to put a research problem in context. Literature reviews can serve a number of important functions-as well as important functions for nurse seeking to develop evidence based practice. It gives character, insight in to the problem and help in selecting methodology, developing and also analyzing data. With these in view an intensive review of literature has been done.

The review of literature relevant to this study is represented in the following sections.

2.2 Studies on learning needs of patients with heart failure.

2.3 Studies related to knowledge of patients with heart failure.

2.4 Studies on management of patients with heart failure.

2.2 Studies on learning needs of patients with heart failure

Boyde et al., (2009) conducted a study on learning for heart failure patients (The L-HF patient study). The aim of the study was to investigate the learning style and preferences for information delivery of heart failure patients for the purpose of informing the design of educational resources. The design of the study was qualitative. The method was a purposive sample of 12 participants, diagnosed with heart failure and enrolled in a heart failure management programme, participated in semi-structured interviews. Result was four themes emerged: knowledge quest (L-loading), barriers to learning (L-inhibitors), facilitators for learning (L-agonists), and meeting educational needs (L-titration).

Integral to these themes was the participant's relationship with health care professionals. The study provided unique information regarding the preferred learning modality of heart failure patients and, as such, serves to inform the development of appropriate education resources specifically tailored for this population.

Wenby et al., (1999) conducted a study on perceived learning needs of patients with heart failure. The objective of the study was to determine the perceived learning needs of patients with heart failure (HF) compared with identified needs by registered nurses (RNs). The design was descriptive, comparative. Researchers selected two midwestern hospitals: 1 community hospital and 1 that is part of a large, university-affiliated, integrated health care system. A convenient sample of 84 adult patients with HF from left ventricular systolic dysfunction and 84 registered nurses. The Heart Failure Learning Needs Inventory, developed for this study, was used to rate 98 individual items divided into 8 subscales suggested in the Agency for Health Care Policy and Research (AHCPR) practice guidelines. The subscales include general HF information, psychologic adaptation to illness, risk factors, medications, diet, activity, prognosis, and signs and symptoms. Multivariate analysis of variance was completed. The patients perceived the subscales of general HF information, risk factors, medications, prognosis, and signs and symptoms as more important to learn than the RNs did ($P < 0.05$). Patients perceived diet information as less important to learn than the RNs did ($P < 0.05$). There were no differences in the patients' and nurses' perceptions in the activity and psychologic subscales. The patients perceived all 8 subscales as more realistic to learn than the RNs did ($P < 0.05$). Although not in identical order, both groups ranked education related to medication and signs and symptoms as the 2 priority areas. Diet information was ranked eighth by the patients and third by the RNs. The findings were consistent with previous research supporting the overall trend that patients with HF perceived patient education to be more important and realistic to learn during hospitalization than the nurses did. Patients and nurses identified education

related to signs and symptoms and medication as the 2 most important content areas. In comparison with the AHCPR clinical practice guidelines, the group of RNs studied would ascribe the additional category of signs and symptoms as essential content to be taught during hospitalization.

Chan et al., (2003) conducted a study on learning needs of patients with congestive heart failure. The objective of the study was to increase differentiation between patients' ratings of information needs by modifying the CHF Patient Learning Needs Inventory (CHFPLNI) and examined predictors of learning needs. Thirty-four inpatients with CHF from the Toronto General Hospital, Toronto, Ontario completed the modified CHFPLNI and rank ordered the perceived importance of eight categories of CHF knowledge measured by the CHFPLNI. Patients also completed measures of emotional distress, fatigue, health beliefs, locus of control and current CHF knowledge. Ratings across all information categories were similar ($M=4.4-5.3/7$) and highly correlated ($r=0.52-0.87$). Patients indicated information on medication, cardiovascular anatomy and physiology, and treatment were the most important to learn on both the CHFPLNI and by rank ordering. Higher fatigue was correlated with information needs on diet ($r=0.37$), activity ($r=0.37$), psychological ($r=0.38$) and risk ($r=0.37$) factors. No other variables consistently predicted learning needs. Researcher concluded that changing the format of the CHFPLNI did not increase the differentiation of patients' ratings across information categories. The assessment of patients' learning needs using extensive questionnaires does not appear warranted because simple rank ordering obtained similar information. Individuals who were more fatigued wanted more information on those aspects of care that they managed on a day-to-day basis.

Clark and Lan (2004) conducted a study on heart failure patient learning needs after hospital discharge. This descriptive-co relational study examined the perceived learning needs of heart failure patients in post discharge settings, as well as the influence of demographic variables on these

learning needs. The Outpatient Heart Failure Learning Needs Inventory was used to rate subjects' perceptions of the importance of educational topics on a five-point Likert scale. Findings indicated that subjects perceived signs and symptoms and medications as most important to learn and diet, activity, and psychological factors as least important to learn. These findings are consistent with previous research and provide a framework on which to base the development of educational programs for patients with heart failure. A significant finding was that nearly 25% of screened patients were unable to participate because they were unaware that they had been diagnosed with heart failure.

Frattoni et al.,(1998) conducted a study on learning needs of congestive heart failure patients. The purpose of this study was to compare the perceived learning needs of CHF patients by patients and nurses, and to identify existing gaps between their perceptions. Fifty (50) CHF patients and 47 cardiac nurses were surveyed using a modified version of the CHF Patient Learning Needs Inventory developed by Hagenhoff et al. This instrument measured the importance of specific learning topics within the categories of anatomy and physiology, medications, diet, risk factors, activity, psychological factors, and other pertinent information. The results indicated that both groups found most information "moderately" to "very" important to learn. The patients generally rated all information items higher than nurses did. The most significant finding was that the nurses rated the diet category as second in importance, while the patients rated it last. The results from the study will be incorporated into a needs-based educational program for CHF patients.

Raffi (2009) conducted a study on the importance of learning needs of CHF patients from patient's and nurse's perspective. The aim of the study was to determine the perceived importance of learning needs of patients with heart failure compared with their needs identified by nurses. The study was a descriptive –comparative study in which 250 heart failure patients were recruited

by convenience sampling. One hundred eighty one nurses were also selected by numerations in Tehran cardiac hospital of Shahid Rajaei. Data were collected by the “importance” component of CHFPLNI and were analyzed using SPSS-11. The patients perceived the subscale of “medication” and nurses perceived the subscale of “Risk factors” as the most important titles to learn and were agreed upon the importance of “Diet information.” Subscales of “activity”, “anatomy and physiology” and “psychological factors” were not so important to learn as perceived by both groups. The nurses perceived all of the 7 subscales and the total scale as having more importance for learning than the patients did. ($p=0.000$). Female patients ($p=0.007$), patients with baccalaureate education ($p=0.001$) and nurses with advanced preparation ($p=0.040$) perceived the learning needs as more important than others. The authors concluded that giving more importance to the learning needs of the patients by nurses and the difference of rating of the importance of learning needs by the two groups proposed the possibility of inattention to important learning needs from the patient perspective.

2.3 Studies related to knowledge of patients with heart failure

Ni H et al., (1999) conducted a study among patients with heart failure. The objective of the study was to assess the knowledge level of and adherence to self-care among patients with heart failure and to determine associated factors. Authors conducted a needs-assessment survey among new patients visiting a heart failure clinic from April 1997 through June 1998. Multiple linear regression analysis was used to assess the factors predictive of patients' knowledge level and adherence behaviors. Of the 113 patients surveyed, 77% were referred by cardiologists and 60% had New York Heart Association class III or IV status. Two thirds of the patients reported receiving information or advice about self-care from health care providers. When asked how much they knew about congestive heart failure, however, 37% said "a little or nothing," 49% said "some," and only 14% said "a lot." Approximately 40% of the patients did not recognize the importance of

weighing themselves daily and 27% weighed themselves twice a month or less often. Although 80% of the patients knew they should limit their salt intake, only one third always avoided salty foods. Additionally, 25% of the patients did not appreciate the risk of alcohol use and 36% believed they should drink a lot of fluids. The multiple linear regression analysis indicated that a higher knowledge score was associated with being married, prior hospitalization, and having received both advice and information about self-care from physicians or nurses. A poor adherence behavior score was associated with being unmarried, lower perceived self-efficacy, a lack of knowledge about self-care, and no prior hospitalization. They observed a gap between patients receiving and absorbing or retaining information on self-care for congestive heart failure supplied by health care providers.

2.4 Studies on management of patients with heart failure

Grange (2005) conducted a study on the role of nurses in the management of heart failure. Care provided by specialist nurses has been shown to improve outcomes for patients with chronic heart failure (CHF), significantly reducing the number of unplanned readmissions, length of hospital stay, hospital costs, and mortality. Most patients develop CHF as a result of coronary artery disease. Once cardiac damage has occurred, the risk of developing heart failure can be reduced by providing appropriate treatment at appropriate dosages. While cardiac rehabilitation clinics provide an opportunity to check drug usage, their prime focus is on optimising patients' physical well being following a heart attack. In addition, evidence suggests that general practitioners are frequently reluctant to initiate appropriate treatments and to up-titrate drug dosages even for patients with diagnosed heart failure. Therefore, to ensure that these patients are not left on starting doses of medications many hospitals are now setting up nurse led post-myocardial infarction (MI) clinics. The Omada programme is a secondary care based, nurse led model of care set up in 1999 to improve the management of CHF by providing appropriate patient education within a nurse

led clinic setting, optimising evidence based medication and fostering partnership between health professionals in both primary and secondary care. The model of care is highly applicable to the post-MI setting, where it can ensure that patients receive better care at an earlier stage.

Dracup et al., (1994) conducted a study on management of Heart Failure. The objective of the article was to review the role of counseling, education, dietary modifications, and exercise for patients with heart failure due to left ventricular systolic dysfunction. The authors reviewed studies published in English between 1966 and 1993 and referenced in MEDLINE or EMBASE. They used the search terms heart failure, congestive; congestive heart failure; heart failure; cardiac failure; and dilated cardiomyopathy in conjunction with terms for the specific areas of interest. Where data were lacking, we relied on opinions of panel members and peer reviewers. Studies were reviewed to determine whether patients had heart failure due to systolic dysfunction (left ventricular ejection fraction, (0.35 to 0.40) and whether clinical outcomes were reported. Studies that reported only intermediate outcomes (eg, hemodynamics) were not reviewed. They concluded that counseling and education can improve patient outcomes and decrease unnecessary hospitalizations. Patients with mild to moderate heart failure should be restricted to 3 g/d of sodium initially. Those who are unresponsive to this dosage or who have more severe disease should be advised to consume 2 g/d or less. Patients should be strongly advised to drink no more than 30 mL/d of alcohol or, preferably, to abstain completely. Exercise training is safe and can improve exercise duration and symptoms. Adherence to the treatment plan should be stressed and monitored at each visit. Clinicians should inform patients of the seriousness of their disease and their prognosis, but they should emphasize that patients can continue to remain active and enjoy a reasonable quality of life.

2.5 Summary

Review of literature enabled the investigator to have a deep knowledge and insight into the problem. From the selected studies, the authors pointed out the importance of learning needs of patients with heart failure for giving comprehensive care to them.

Chapter - 3

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the systematic way to solve the research problem. It includes the step that researcher adopts to study his problem with the logic behind. It indicates the general problem of organizing the procedure of gathering valid and reliable data for an investigation.

This chapter provides a brief description of the method adopted by the investigator to conduct this study. This chapter includes the research approach, research design, and setting of the study, the sample and sampling technique. It further deals with the development of the tool, pilot study, and procedure for data collection and plan for data analysis.

3.2 Research Approach

Descriptive survey approach was used in the study.

3.3 Research Design

Research design is concerned with overall framework for conducting the study. The design used for fulfilling the objectives of the study. In order to assess the learning needs of heart failure, a self-prepared validated heart failure learning needs inventory including 14 items were used.

3.4 Setting of the study

This study was conducted in cardiac medical intensive care unit and cardiac medical ward of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. The rationale of selecting this institute was that the

investigator was more familiar with the institution. Monthly approximately 20 to 40 patients with heart failure admitted in Cardiac medical units of SCTIMST, Trivandrum. SCTIMST is an institute of national importance, where there is a separate department for Cardiac Medical units, which includes Cardiac Medical Intensive Care Unit and Cardiac Medical Ward.

3.5 Study population

The target population of the study was both male and female patients with heart failure admitted in cardiac medical ICU and cardiac medical ward of SCTIMST, Trivandrum.

3.6 Sample and sampling technique

Convenient sampling was used for this study. The sample size was 35. Ten samples were selected for pilot study. The samples selected for the study were heart failure patients who were admitted in SCTIMST, Trivandrum during the data collection period who fulfilled the inclusion criteria.

3.7 Criteria for sample collection

Inclusion criteria

- Patients who can understand and read Malayalam.
- Patients who are willing to participate.
- Male and female persons diagnosed to have heart failure.

Exclusion criteria

- Patients in advanced stage of heart failure.
- Patients have impaired cognitive status.

3.8 Data collection tool

Data collection tool refers to the instrument, which was used by the investigator to obtain relevant data. The investigator prepared a structured questionnaire after an extensive review of literature. The questionnaire was examined and content validated by experts in SCTIMST. The research tool was finalized according to expert's opinion.

3.9 Description of the tool

The structured questionnaire consists of two sections.

Section: 1

General information or Demographic data

It includes name, age, sex, educational status and financial category (according to the hospital records) and underlying heart disease causing heart failure.

Section: 2

There were three introductory questions to elicit reported knowledge about the disease condition, management and a 5-point rating scale with 14 items regarding different learning needs of patients with heart failure.

3.10 Pilot study

A pilot study was conducted from September 25th to September 30th for 5 days. The aim of the study was to find out the practicability and feasibility of the tool. The pilot study was conducted among 10 samples. The sampling technique used was convenient sampling. Pilot study was conducted after obtaining permission from the authorities of hospital management. Informed consent was taken from each sample. Then finalized tool was used to assess the

learning needs of heart failure patients. The pilot study finding revealed that the study was feasible and practicable.

3.11 Data collection procedure

Since there was no problem encountered in the pilot study, the same method of data collection was used for the final study. The final study was conducted during the month of October 2011, for a period of 30 days. The data were collected from the patients with heart failure admitted in cardiac medical intensive care unit and cardiac medical ward of SCTIMST, Trivandrum. The investigator first introduced her and explained the need and purpose of the study, their learning needs assessed after getting consent from the patients. The samples were very cooperative and no problems occurred during data collection.

3.12 Plan for analysis

After data collection, data will be organized, tabulated, summarized and analyzed by using statistics.

3.13 Summary

This chapter includes the research approach, research design, setting of the study, study population, sample, sample size, sampling technique, selection criteria, description of tool, pilot study, data gathering process and plan for data analysis.

Chapter - 4

ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

Analysis is the process of organizing and synthesizing of data in such a way that project question can be answered. The overall analysis is to organize structure and to elicit meaning from collected data (Polit & Beck 2006). Interpretation is a process of making a sense of the result and examining the implication of finding within a border context.

This chapter deals with the analysis and interpretation of the data collected from 35 heart failure patients admitted in SCTIMST, Trivandrum.

The data in this study was arranged and analyzed under the following sections.

- 1) Distribution of samples according to the demographic data.
- 2) Prioritised learning needs of patients with heart failure as perceived by them.

4.2 Distribution of samples according to demographic data.

Table 4.2a. Distribution of samples according to age.

<i>Age group</i>	<i>Frequency</i>	<i>Percentage</i>
10-30	3	8.57%
30-50	11	31.42%
50-70	21	60%
Total	35	100%

The age of the samples ranged between 14 and 72 years. From the above table, it is evident that majority (60%) belonged to the age group above 50 years.

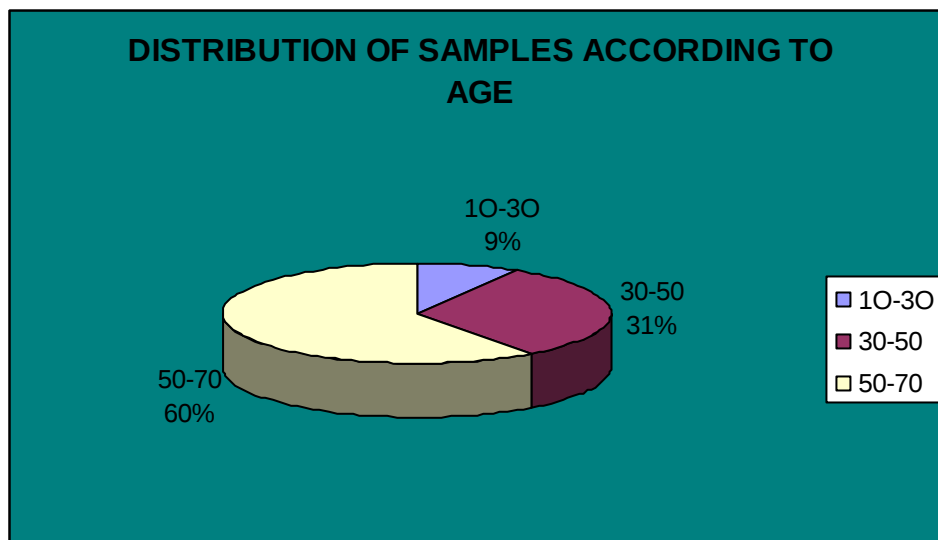


Fig 4.1. Pie diagram of samples according to age group

Table 4.2b Distribution of samples according to sex

<i>Sex</i>	<i>Frequency</i>	<i>Percentage</i>
Male	29	82.86%
Female	6	17.14%
Total	35	100

The data given in table 4.2b shows that majority of samples were males (82.86%).The same data is shown in fig 4.2 as pie diagram.

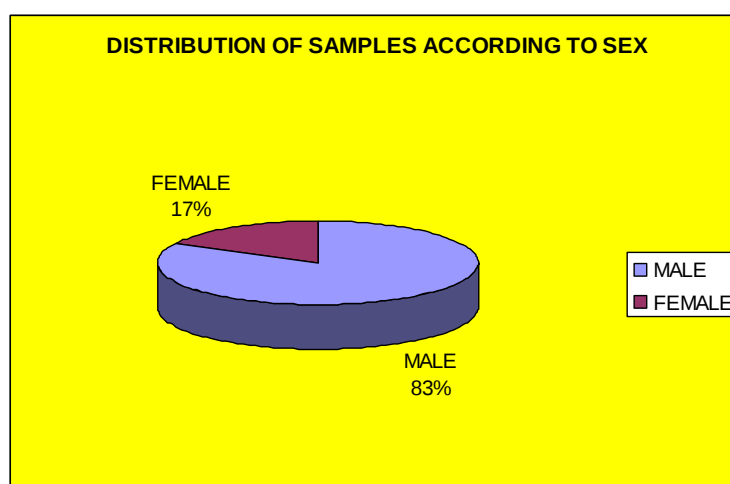


Fig 4.2. Pie diagram of samples according to sex

Table 4.2c. Distribution of samples according to education.

<i>Education</i>	<i>Frequency</i>	<i>Percentage</i>
Lower primary	4	11.42%
Upper primary	5	14.29%
High school	21	60%
Pre-degree and above	5	14.29%
Total	35	100%

The data given in table 4.2c shows that majority of the patients had high-school education. The same data shown in figure 4.3 as pie diagram.

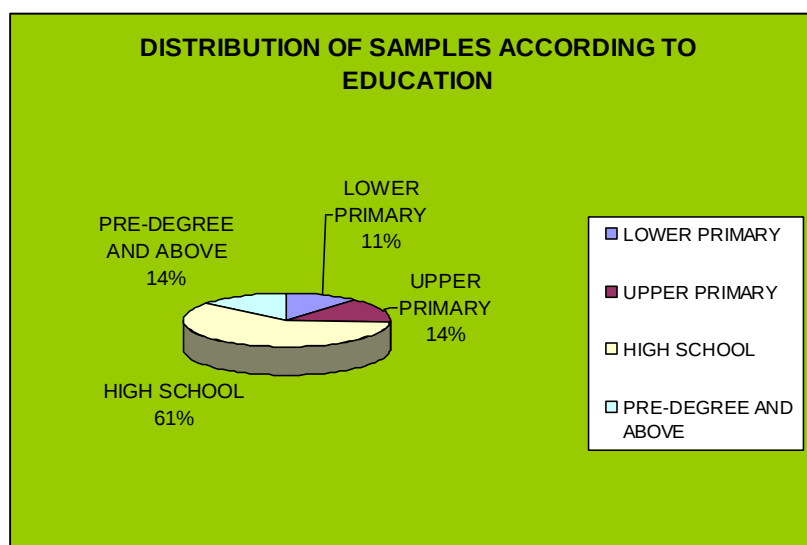


Fig 4.3. Pie diagram of samples according to education

Table. 4.2d. Distribution of samples according to category

<i>Category</i>	<i>Frequency</i>	<i>Percentage</i>
A	5	14.29%
B1	14	40%
B	6	17.14%
C	1	2.86%
D	9	25.71%
Total	35	100%

The data given in table 4.2d shows that majority of the patients included in B1 category. The same data is shown in Figure.4.4 as pie diagram.

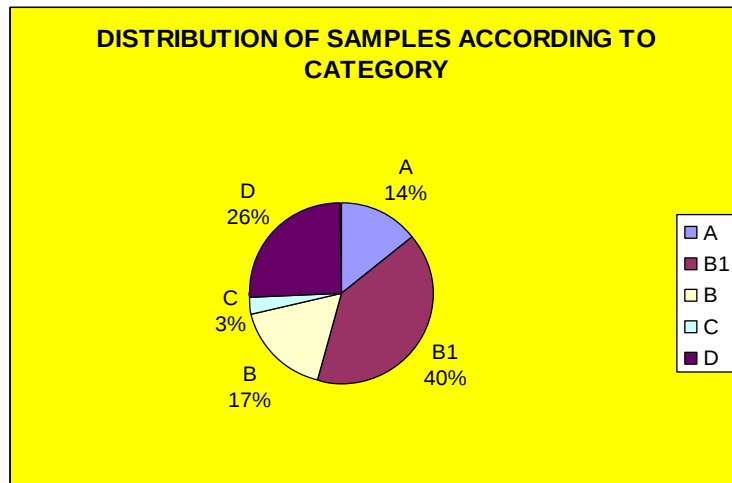


Fig 4.4 Pie diagram of samples according to category.

Table 4.2e Distribution of samples according to diagnosis

<i>Diagnosis</i>	<i>Frequency</i>	<i>Percentage</i>
M.I.	18	51.42%
Valvular heart diseases	10	28.57%
Cardiomyopathy	5	14.29%
WPW Syndrome	1	2.86%
Total	35	100%

The data given in table 4.2e shows that majority of samples had the history of AWTI. The same data is given in Figure 4.5 as pie diagram.

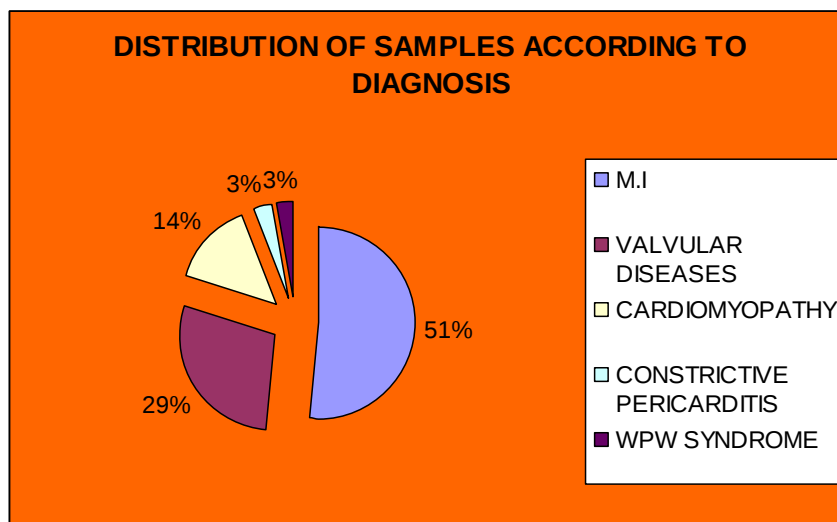


Fig 4.5 Pie diagram of samples according to diagnosis

Table 4.2f *Distribution of samples according to reported knowledge.*

<i>Knowledge level</i>	<i>Frequency</i>	<i>Percentage</i>
Poor knowledge	6	17.14%
Average knowledge	7	20%
Good knowledge	22	62.86%
Total	35	100%

The data given in table 4.2f shows that majority of the samples had reported good knowledge about their disease condition. The same data is given in figure 4.6 as pie diagram.

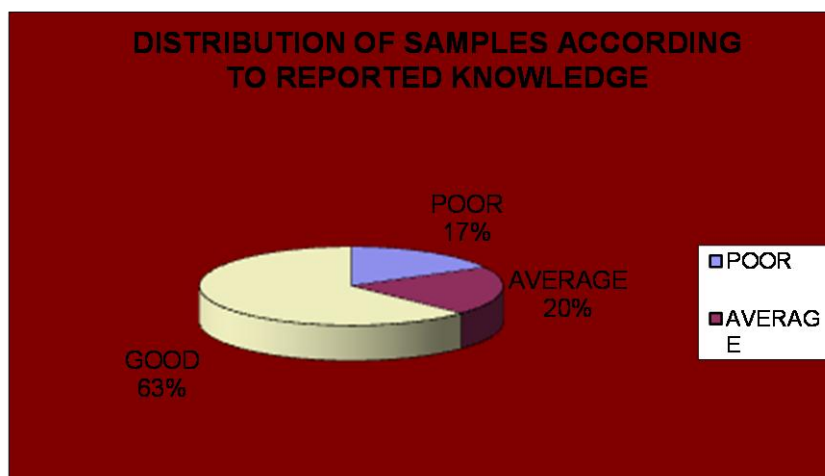


Figure 4.6 *Pie diagram of samples according to reported knowledge.*

Table 4.2g Distribution of samples according to the most important thing they want to learn.

<i>Topic</i>	<i>Frequency</i>	<i>Percentage</i>
Medical management	32	91.43%
Surgical management	3	8.57%
Total	35	100%

The data given in table 4.2g shows that majority of samples wanted to learn about medical management. The same data is given in figure 4.7 as pie diagram.

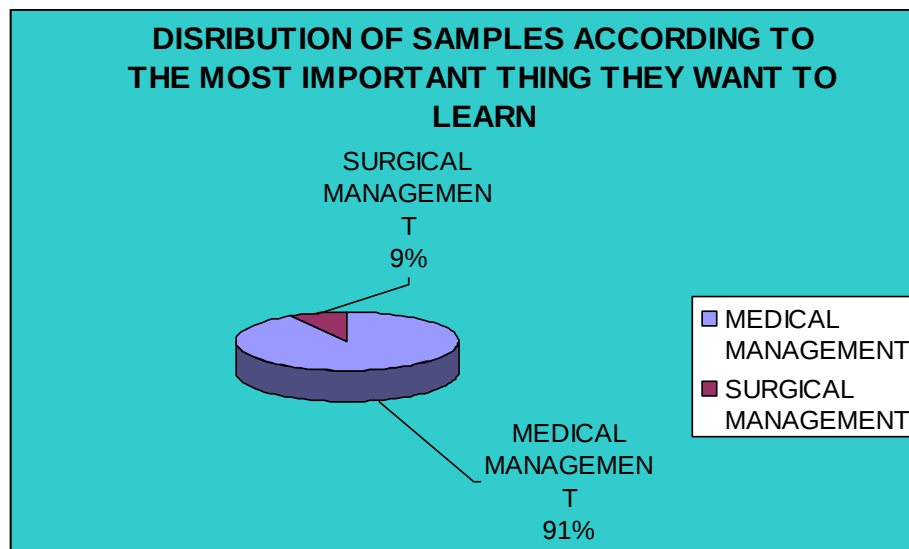


Fig: 4.7 Pie diagram of samples according to the most important thing they want to learn.

**TABLE 4.3 PRIORITISED LEARNING NEEDS OF PATIENTS WITH
HEART FAILURE AS PERCEIVED BY THEM.**

<i>Sl no:</i>	<i>Learning needs</i>	<i>Percentage</i>
1.	I need to know... ...what I can do to improve the function of my heart.	91.43%
2.	I need to know... ...the diagnostic tests for heart failure.	81.43%
3.	I need to know... ...why I am taking each medication, it's side effects and general rules about taking medications.	80.71%
4.	I need to know... ...the signs and symptoms of worsening heart failure.	80%
5.	I need to know... ...the lifestyle changes for controlling the symptoms of heart failure.	76.43%
6.	I need to know... ...the recommended daily salt intake.	74.28%

7.	I need to know... ...the causes of my heart condition.	74.28%
8.	I need to know... ...the treatments of heart failure.	73.57%
<i>Sl no:</i>	<i>Learning needs</i>	<i>Percentage</i>
9.	I need to know... ...the symptoms caused by heart failure.	72.14%
10.	I need to know... ...the physical activity restrictions, if any...	72.14%
11.	I need to know... ...what the present condition of my heart.	71.43%
12.	I need to know... ...the reason for checking daily weight.	67.86%
13.	I need to know... ...daily fluid intake.	65.71%
14.	I need to know... ...the structure of the heart and how it works.	64.28%

The rating scale scores of the thirty five sample, each item (0-4) was added. The total obtainable score for each item ranged from 0 to 140. The obtained score for each item is converted to percentage to find out the priority of learning needs as perceived by them. Ratings across all the learning need items of patients with heart failure varied from 64% to 91%. Table 4.3 shows that the most prioritised learning need for patients with heart failure was the different measures to improve the function of their heart (91%), whereas the least priority was given to the anatomy and physiology of heart (64%).

Chapter –5

SUMMARY, CONCLUSION, LIMITATIONS, INTERPRETATIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a brief account of the present study including conclusions drawn from the findings and possible applications of the result, recommendations for future research and suggestions for improving the present study is also included.

5.2 Summary

The specific objective of the study was:-

--To assess the learning needs of patients with heart failure.

The study was conducted in Cardiac medical units of SCTIMST, Trivandrum. Study populations consist of 35 patients with heart failure admitted in CCU and Cardiology medical ward. Learning needs of patients with heart failure assessed with structured questionnaire prepared by the investigator. The data were analyzed using appropriate statistical tests.

5.3 The major findings of the study

The study revealed that majority of samples reported that they had good knowledge about their disease condition. Most of the patients had heart failure as the complication of anterior wall myocardial infarction. Almost all patients were interested to know the various aspects of their disease condition but their level of interest in learning the needs of heart failure is different. All patients expressed that they wanted to know more about each of the 14 items in the learning needs inventory. However the priority was different. Majority of

samples wanted to learn about the measures to improve the function of their heart than other aspects. The least wanted to know learning need was about anatomy and physiology of heart(64%).

5.4 Discussion

There were many studies undertaken to assess the learning needs of patients with heart failure. Frattini et al ., [1998] conducted a study on learning needs of congestive heart failure patients. The purpose of the study was to compare the perceived learning needs of CHF patients by patients and nurses. The most significant findings was that the nurses rated the diet category as second in importance, while the patients rated it last.

Chan et al ., [2003] conducted a study on learning needs of patients with congestive heart failure. Patients indicated information on medication, cardiovascular anatomy and physiology, and treatment were the most important to learn on both the CHFPLNI and by rank ordering.

Wenby et al ., [1999] conducted a study on perceived learning needs of patients with heart failure. They concluded that patients with heart failure perceived patient education to be more important and realistic to learn during hospitalization than the nurses did. Patients and nurses identified education related to signs and symptoms and medication as the two most important content areas.

From the above studies authors concluded that a needs-based assessment of health status, expectations, and perceptions is patient-centered and has the capacity to not only evaluate current health status but also plan and project care plans. Needs assessment is a dynamic construct rather than a point in time consistent with other assessment modalities, such as quality of life.

Multidimensional needs assessments allows for planning and projection of needs ,not only on an individual but also a population basis.

5.5 Limitations

- Study was limited to the SCTIMST, Trivandrum.
- A comparison between ratings of nurses and patients could not be done since nurses were not studied.
- Only Malayalam speaking patients were included in this study.
- The sample size was limited to 35.

5.6 Recommendations

- A similar study can be conducted in a large sample.
- A similar study can be conducted in some selected group of hospitals.
- Same study can be done in cardiac surgical ICU and cardiac surgical wards.
- Using modified questionnaire and educational material can be used to conduct this study.

5.7 Conclusion

Based on the findings of the study, the following conclusions were drawn. With limited number of samples, the study findings lack generalization. Therefore studies using more number of samples might be useful to validate the findings. However this study concludes that assessing learning needs of patients with heart failure has a fundamental role in education and training of these patients.

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സമ്മതപത്രം

ഹൃദയത്തിനുണ്ടാകുന്ന ഒരു രോഗാവസ്ഥയായ ഹാർട്ട് ഫെയ്ല്യർ ഉള്ള രോഗികൾ പഠിക്കാൻ ആഗ്രഹിക്കുന്ന കാര്യങ്ങൾ എന്ന വിഷയത്തെക്കുറിച്ച് പഠിക്കുന്നതിന് തിരുവനന്തപുരം എസ്.സി.ടി ആശുപത്രിയിലെ ഡി.സി.എൻ നഴ്സിംഗ് വിദ്യാർത്ഥിനിയിയായ ധന്യ.ഐ.എസ്സ് നടത്തുന്ന പഠനത്തിൽ സഹകരിക്കാൻ ഞാൻ സമ്മതിക്കുന്നു. എപ്പോൾ വേണമെങ്കിലും എനിക്ക് പിന്തിരിയാമെന്നും, എന്റെ സഹകരണമോ, നിസ്സഹകരണമോ എനിക്ക് ലഭിക്കുന്ന ശുശ്രൂഷയെ ബാധിക്കുകയില്ലെന്നും ഞാൻ മനസ്സിലാക്കുന്നു. എല്ലാ വിവരങ്ങളും തികച്ചും രഹസ്യമായി സൂക്ഷിക്കുമെന്നും അവ പഠനത്തിനു മാത്രമേ ഉപയോഗിക്കുകയുള്ളൂ എന്നും ഞാൻ മനസ്സിലാക്കുന്നു. ആയതിനാൽ സ്വമനസ്സാലെ ഞാൻ ഈ പഠനത്തിന്റെ ഭാഗമാകാമെന്ന് സമ്മതിക്കുന്നു.

വിവരം നൽകുന്ന വ്യക്തിയുടെ

ഒപ്പ് :

പേര് :

സ്ഥലം :

തീയതി :

ഹൃദയത്തിനുണ്ടാകുന്ന ഒരു രോഗാവസ്ഥയായ ഹാർട്ട് ഫെയ്ല്യർ ഉള്ള രോഗികൾ പഠിക്കാൻ ആഗ്രഹിക്കുന്ന കാര്യങ്ങൾ നിർണയിക്കാനുള്ള ചോദ്യാവലി.

വ്യക്തിഗത വിവരങ്ങൾ

രോഗിയുടെ പേര് :

വയസ്സ് :

പുരുഷൻ/ സ്ത്രീ :

വിദ്യാഭ്യാസം :

ഹോസ്പിറ്റൽ നമ്പർ :

വരുമാന കാറ്റഗറി :

1. താങ്കൾക്ക് എന്താണ് അസുഖം ?

2. താങ്കളുടെ അസുഖത്തെക്കുറിച്ച് എന്തൊക്കെ കാര്യങ്ങൾ അറിയാം ?

3. താങ്കളുടെ അസുഖവുമായി ബന്ധപ്പെട്ട ഏതു കാര്യമാണ് താങ്കൾ ഏറ്റവും കൂടുതലായി അറിയാൻ ആഗ്രഹിക്കുന്നത് ?

താങ്കൾക്ക് അസുഖസംബന്ധമായ കാര്യങ്ങൾ അറിയാൻ എന്തുമാത്രം താൽപര്യമുണ്ട് എന്ന് താഴെതന്നിരിക്കുന്ന ഓരോ കാര്യത്തിനും നേരെ ശരി (✓) അടയാളപ്പെടുത്തുക.

ചോദ്യങ്ങൾ	താൽപര്യമില്ല	കുറച്ച് താൽപര്യമുണ്ട്	താൽപര്യമുണ്ട്	ഏറെ താൽപര്യമുണ്ട്	വളരെയധികം താൽപര്യമുണ്ട്
1. ഹൃദയത്തിന്റെ ഘടനയേയും, ഹൃദയം എങ്ങനെയാണ് പ്രവർത്തിക്കുന്നത് എന്നും അറിയാൻ					
2. താങ്കളുടെ ഹൃദയത്തിന്റെ അവസ്ഥ എന്താണെന്നറിയാൻ					
3. താങ്കളുടെ അസുഖത്തിന്റെ കാരണങ്ങൾ എന്താണെന്നറിയാൻ					
4. താങ്കളുടെ രോഗത്തിന്റെ ലക്ഷണങ്ങൾ ഏതൊക്കെയാണെന്നറിയാൻ					
5. രോഗം മുർച്ഛിക്കുമ്പോൾ രോഗലക്ഷണങ്ങളിലുണ്ടാകുന്ന മാറ്റങ്ങളെക്കുറിച്ചറിയാൻ					
6. താങ്കളുടെ അസുഖത്തിന് എന്തൊക്കെ പരിശോധനകളാണ് നടത്തേണ്ടത് എന്നറിയാൻ					
7. താങ്കളുടെ അസുഖത്തിന് എന്തൊക്കെ ചികിത്സകളാണ് ലഭ്യമായിട്ടുള്ളത് എന്നറിയാൻ					
8. ദിവസവും ശരീരഭാരം നോക്കേണ്ടതിന്റെ പ്രാധാന്യത്തിന്റെ അളവ് അറിയാൻ					
9. താങ്കൾക്ക് ഒരു ദിവസം കഴിക്കാവുന്ന ഉപ്പിന്റെ അളവ് അറിയാൻ					

ചോദ്യങ്ങൾ	താൽ പര്യമില്ല	കുറച്ച് താൽപ്പര്യം ഉണ്ട്	താൽപ്പര്യം ഉണ്ട്	ഏറെ താൽപ്പര്യം ഉണ്ട്	വരെയധികം താൽപ്പര്യം ഉണ്ട്
10. താങ്കൾക്ക് ഒരു ദിവസം കുടിക്കാവുന്ന വെള്ളത്തിന്റെ അളവ് അറിയാൻ					
11. താങ്കൾ ചെയ്യുന്ന പ്രവൃത്തികളിൽ എന്തൊക്കെ നിയന്ത്രണങ്ങളാണ് ഏർപ്പെടുത്തേണ്ടത് എന്നറിയാൻ					
12. താങ്കൾ കഴിക്കുന്ന ഓരോ മരുന്നും എന്തിനാണ് കഴിക്കുന്നതെന്നും, പാർശ്വഫലങ്ങളെക്കുറിച്ചും, ശ്രദ്ധിക്കേണ്ട കാര്യങ്ങളെക്കുറിച്ചും അറിയാൻ					
13. താങ്കളുടെ അസുഖം നിയന്ത്രിക്കാൻ ജീവിത രീതികളിൽ എന്തൊക്കെ മാറ്റങ്ങളാണ് വരുത്തേണ്ടത് എന്നറിയാൻ					
14. ഹൃദയത്തിന്റെ പ്രവർത്തനം മെച്ചപ്പെടുത്താൻ എന്തെല്ലാം കാര്യങ്ങൾ ചെയ്യണം എന്നറിയാൻ					

താങ്കളുടെ രോഗത്തെക്കുറിച്ച് വേറെ എന്തെങ്കിലും കാര്യങ്ങൾ അറിയാൻ ആഗ്രഹിക്കുന്നുണ്ടോ ?
ഉണ്ട്, എങ്കിൽ എന്തൊക്കെ ?