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Counseling Patients with Heart Failure

Systematic Literature Review

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Thesis abstract

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Heart failure (HF) is a major global health problem as a result of its chronic and complex nature. It is caused by different health risk factors such as high blood pressure, diabetes, coronary heart disease etc., which often progresses into heart failure over time. Heart failure symptoms often vary depending on the severity of the condition. This condition is known to affect patients' quality of life, increase cost of care and rate of hospitalization.

Patient counseling is a key component in HF patient intervention process. Patient counseling is focused on educating HF patients on their health condition, life style modification and self-care management.

The purpose or aim of the research is to describe how to educate patients on the health implications associated with heart failure and self-care management.

The goal is to improve and maintain patient functional capacity and well-being by managing and controlling risk symptom and life style modification.

The research task is to evaluate the effect of patient counseling on heart failure patient in regards to patient's quality of life, compliance, rate of re-admission and health cost.

In this research study, both systematic literature review process and inductive content analysis approach were used in information searching and data analysis. Result showed that patient counseling improved patient's quality of life and compliance and reduced patient's re-admission rate and health care cost. This was as a result of patient's life style modification and self management ability.

Patient's functional capacity and well-being depends on the above mentioned parameters. An improvement in patients QOL and compliance automatically reduces rate of re-admission and cost of health care, hence providing an overall improved patient health standard and well-being.

Keywords: Heart, Heart failure, Patient Counseling with heart failure

SEINÄJOEN AMMATTIKORKEAKOULU

Opinnäytetyön tiivistelmä

Koulutusyksikkö: Sosiaali- ja terveysalan yksikkö

Tutkinto-ohjelma: Hoitotyö

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Sydämen vajaatoiminta on merkittävä maailmanlaajuinen terveysongelma johtuen sen kroonisuudesta ja monimutkaisuudesta. Erilaiset terveysriskitekijät aiheuttavat ajan myötä sydämen vajaatoiminnan. Sydämen vajaatoiminnan oireet riippuvat tilan vakavuudesta. Sydämen vajaatoiminta vaikuttaa potilaan elämänlaatuun, elinikäisen sairauden hoito on kallista ja sairaalahoidon tarve lisääntyy.

Potilaanohjaus on avaintekijä interventiossa. Potilaanohjauksessa keskitytään ohjaamaan potilaita heidän sairautensa, ohjataan elämäntapamuutoksiin sekä opastetaan itsehoitoon.

Tutkimuksen tarkoituksena on kuvata terveellisten elämäntapojen ohjauksen vaikutusta sydämen vajaatoimintaan ja itsehoidon hallintaan.

Tavoitteena on parantaa ja ylläpitää potilaan toimintakykyä ja hyvinvointia seuraamalla riskitekijöitä ja tukemalla elämäntapamuutosta.

Tutkimuksen tehtävänä on arvioida potilasohjauksen vaikutuksia potilaan elämänlaatuun ja annettujen ohjeiden noudattamiseen.

Tässä tutkimuksessa käytetään sekä systemaattista kirjallisuuskatsausprosessia että induktiivista sisällönanalyysia tiedonhakuun sekä tietojen analysointiin. Tulokset osoittavat, että potilaan ohjaus parantaa potilaan elämänlaatua, annettujen ohjeiden noudattamista sekä vähentää sairaalahoidon tarvetta ja terveydenhuollon kustannuksia. Nämä tulokset ovat potilaiden elämäntapamuutoksen ja itsehoidon seurauksia.

Potilaan toimintakyky ja hyvinvointi riippuu edellämainituista parametreista. Elämänlaadun paraneminen ja annettujen ohjeiden noudattaminen vähentää sairaalahoidon tarvetta sekä terveydenhuollon kustannuksia, antamalla täten kuvan kokonaisvaltaisesti parantuneesta terveydentasosta sekä hyvinvoinnista.

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Terms and Abbreviations

HF	Heart failure
AHA	American heart association
CHD	Coronary heart disease
CAD	Coronary artery disease
CHF	Congestive heart failure
LV	Left ventricle
LVEF	Left ventricular ejection fraction
MDC	Multi - disciplinary care
RC	Regular care
QOL	Quality of life
HTN	Hypertension

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1 INTRODUCTION

Over 3 decades, heart failure incidence and prevalence has been on an increase. Heart failure is a growing global health problem with approximately 23 million people affected nationwide and this figure is expected to exceed 23.6 million by the year 2030. Heart failure is known to be one of the major causes of death globally with an increase risk of occurring in one in every five person. Heart failure has both high morbidity and mortality rate with a low prognosis rate. It is estimated that 50% of people diagnosed with heart failure disease dies within the space of four years. The common risk factors known to contribute to the increase in heart failure are aging ,fluid retention, valves disorder, coronary artery disease, high blood pressure, diabetes etc. Heart failure patient are known for frequent re-admission or hospitalization. This is as a result of the chronic and progressive nature of heart failure syndrome. Heart failure is recognized as the most expensive cardiovascular disease in the world due to its high consumption of clinical and financial resources. Heart failure is not curable but necessary intervention can help in improve patient's health condition.

Patient counseling is a key component in heart failure intervention process. It is a patient tailored care approach which focuses on self- care management, life style modification, symptom and risk monitoring. Nurses have a huge responsibility in managing, educating, assessing and evaluating patient with HF condition, therefore it is paramount that nurses adopt all necessary measures to assist patient understand and manage their health condition.

The purpose or aim of the research is to describe how to educate patients on the health implications associated with heart failure and self-care management. The objective of this research is to improve and maintain patient functional capacity and well-being by managing and controlling risk symptom and life style modification. The research task will be to evaluate the effect of patient counseling on heart failure patients in regards to patient's quality of life, patient adherence or compliance, rate of re- admission and health cost.

The study focused on patient within the age bracket of 65 and above, however the study did not target on any specific region or country; instead it was a general review of heart failure conditions. Information and data sourcing was basically in English language and for the benefit of clarity, patient counseling and patient education were used interchangeably in this research study. They are used as the same meaning in this research context.

2 THEORETICAL BACKGROUND

2.1 Heart and its function

According to Jackson (2009, 2), the heart is a sophisticated strong, muscular pump which is about the shape or a little larger than a fist. It is surrounded by the mediastinum of the thorax. An average heart beats 1000 times in every 24 hours and in the process the heart pumps approximate 5 to 20 litres of blood per minute. However, this depends on the body demand because an active body demands more blood than the body at rest. The animated video below in box 1 will help illustrate more.

http://watchlearnlive.heart.org/CVML_Player.php?moduleSelect=bldflo

Box 1. Anatomy of the heart and lungs (AHA [ref. 6 Aug 2015]).

According to Marieb (2009, 364-365), the heart is made up of four hollow chamber or cavities, two on the right and two on the left. The endocardium is lined with each heart chambers to enables smooth blood flow to the heart. The heart two upper chambers are called atria which are also known as the primary receiving chamber and the two lower chambers are the ventricles also known as the discharging chambers. The later chambers are the actual pump of the heart and its function is based on its ability to contract and propel blood out of the heart and into circulation.

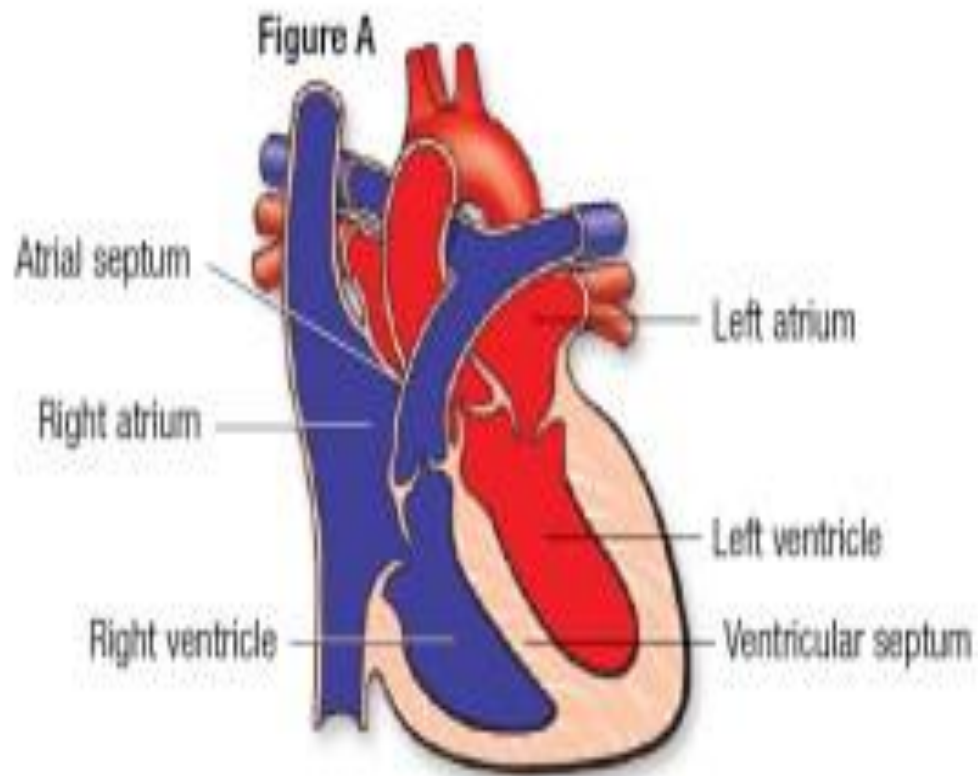


Figure 1. Heart structure (AHA [ref. 4 Feb 2016]).

According to Marieb (2009, 365), heart function involves two major processes; pulmonary circulation and systemic circulation. In the pulmonary circulation, the right atrium receives oxygen-poor blood from the vein of the body via the large superior and inferior venae cavae. The poor oxygen blood is transported to the lungs through the pulmonary trunk where the blood becomes oxygenated and then returned to the left side of heart. Systemic circulation on the other hand, is when oxygen-rich blood travels from the lungs through the pulmonary veins to the left atrium and subsequently to the left ventricle and aorta. The aorta distributes blood to the rest of the body via systemic arteries (Tansy 2010, 1396).

2.2 Heart failure

Heart failure is a slow progressive chronic disease condition resulting from inadequate blood supply to the body organ (Heart failure [ref. 6 Aug 2015]). Disease

conditions such as myocardial infarction (weakening of the heart muscle), high blood pressure or heart valve malfunction, diabetes, atherosclerosis, coronary artery disease etc are known to cause heart failure (Abraham & Krum, 2007 according to Tansy 2010, 1396). Heart failure results when the heart is unable to function properly as a pump (Torpy, Lynn & Golub 2011)

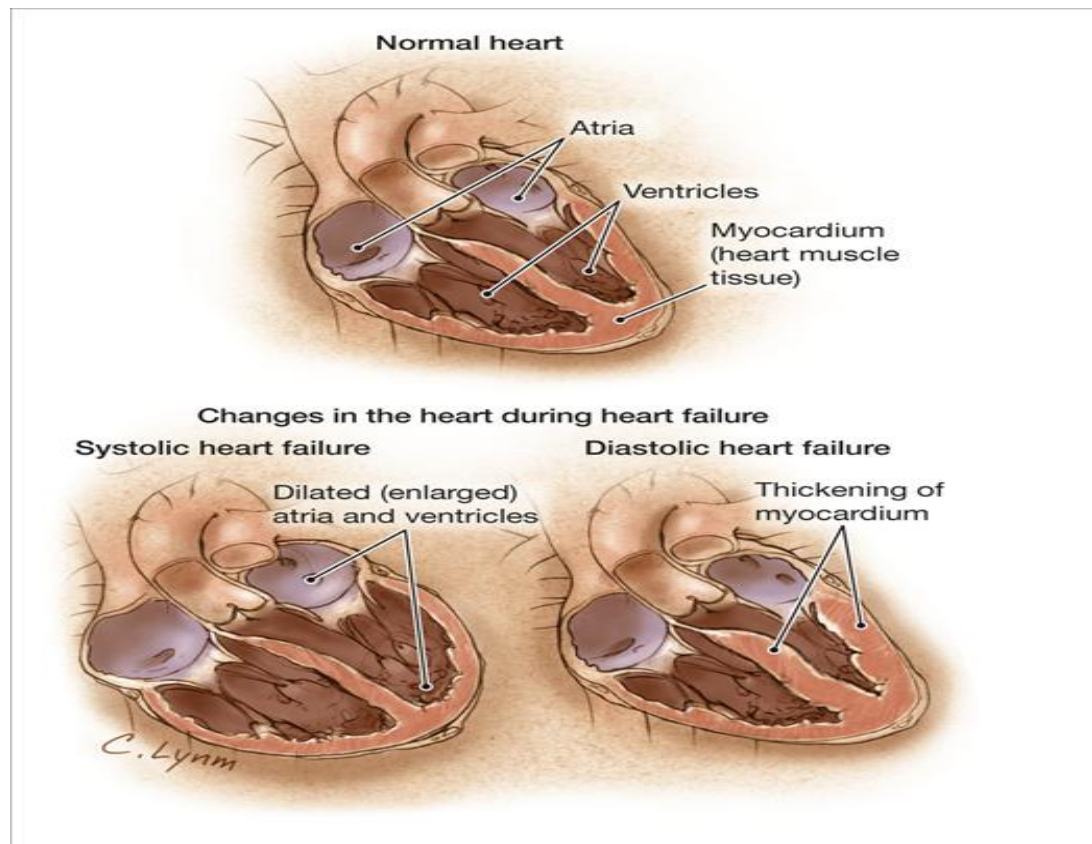


Figure 2. Systolic and diastolic heart failure (Jama 20011).

According to Nicholson (2007, 4), heart failure is the inability of the heart to supply the right volume of blood required to compensate the body demand. This often results when the left ventricle fails to contract well enough to eject enough blood to the body system.

2.3 Classification of heart failure

There are two major classes of heart failure: Left-sided heart failure and Right sided heart failure. Left side heart failure occurs when the left side of the heart or the lower heart chamber also known as the left ventricle is unable to pump or eject

enough amount of blood to the body system (Anatomy of the heart and lungs [ref. 6 Aug 2015]). This often leads to what is called pulmonary congestion because the right side of the heart continues to supply blood to the lung but the left side is unable to eject the returning blood back to the systemic circulation (Nicholson 2007, 11). Left sided heart failure comprises of two types: systolic heart failure and diastolic heart failure. Systolic heart failure occurs when the heart is unable to eject enough blood from ventricles to match the body demand whereas diastolic heart failure on the other hand is when the heart muscles are unable to relax in between heart beats causing blood to back up in the heart chambers and also in the blood vessels. This can often lead to edema where fluid builds up in the lung and the rest of the body.

Right-sided heart failure often results from the malfunction of the left side of the heart. This malfunction affects the functional ability of the right side of the heart. This can result to peripheral congestion, causing blood to back up in the systemic circulation. There is often the presence of edema in the distal part of the body such as the feet, ankles and fingers. In nut shell, when one side of the heart malfunctions, it automatically affects the function of the other side of the heart and consequently leading to the heart failure (Torpy, Lynn & Golub 2011).

2.4 Congestive heart failure

Most often congestive heart failure is used interchangeably with heart failure because they both indicate the same heart condition. Garcia and Wright (2010, xi), defined congestive heart failure as disease caused by the inability of the heart to maintain blood circulation. This consequently results to body tissues congestion and edema. According to Quinn (2006, 4), CHF is a form of heart failure known to cause edema (fluid retention in the peripheral body tissue), swelling and lung congestion. CHF is has a very low prognosis, with quarter of a million death for patient over the age of 65 (Hines, Yu & Randall 2010).

2.5 Heart coping mechanism

Patient often suffer prolong heart condition before been diagnosed. At first the heart tries to cushion and compensate for this effect by enlarging and developing more muscle mass (Quinn 2006, 6). According to Torpy, Lynm & Golub (2011), during systolic malfunction the heart dilates by increasing the size and volume of the heart chamber and in diastolic malfunction the heart exhibit hypertrophic mechanism. In this case the heart thickens its heart wall to accommodate the backed up blood in the heart chamber. Also the heart cope by exhibiting fast pumping mechanism, this helps to increase the cardiac output of blood supply.

2.6 Grading and classification of heart failure

According to Nicholson (2007, 12), one of the ways to grade heart failure is through ejection fraction. The ejection fraction determines the amount or percentage of blood leaving during every ventricular contract and it is also a means of diagnosing heart failure .The left ventricle is measured to determine the ejection fraction because it is considered as the main heart pumping chamber .The normal LV ejection range for a normal heart is from 55 percent and above while 50 percent and below signifies low heart function and a potential heart failure (Jessup and McCauley 2008, 3).The ejection fraction is a way of diagnosing left ventricular systolic malfunction (Nicholson op. cit. 12). This is obtained by dividing the heart stroke volume (70ml) by the left ventricular end-diastolic volume (120 ml) which gives an LV EF of 0.6 or 60%.

LVEF %	Systolic Dysfunction
• 60 %	Normal
• 45– 60 %	Mild left ventricular dysfunction
• 35– 45 %	Moderate left ventricular dysfunction
• 25– 35 %	Severe left ventricular dysfunction
• < 25 %	Extremely severe left ventricular dysfunction

Figure 3. Left Ventricle Ejection Fractions and Systolic Dysfunction (Nicholson 2007)

The new York heart association NYHA is widely known for its classification on heart failure. Heart failure classification categories are based on patient limitation to physical activity. The table below summaries patients heart classification system. (Classes of Heart Failure, [ref. 6 Aug 2015]).

Class	Patient Symptoms
I	No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).
II	Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath).
III	Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
IV	Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.
Class	Objective Assessment
A	No objective evidence of cardiovascular disease. No symptoms and no limitation in ordinary physical activity.
B	Objective evidence of minimal cardiovascular disease. Mild symptoms and slight limitation during ordinary activity. Comfortable at rest.
C	Objective evidence of moderately severe cardiovascular disease. Marked limitation in activity due to symptoms, even during less-than-ordinary activity. Comfortable only at rest.
D	Objective evidence of severe cardiovascular disease. Severe limitations. Experiences symptoms even while at rest.

Figure 4. The New York heart association NYHA classification of heart (failure NYHA 2015).

2.7 Heart failure signs and symptoms

According to Simon and Lynd (2008, 4), symptomatic heart failure are associated with the left ventricular dysfunction (systolic or diastolic), abnormal neurohormonal regulation, unmet metabolic demand, breathlessness and intolerance to exercise, fluid retention, premature death.

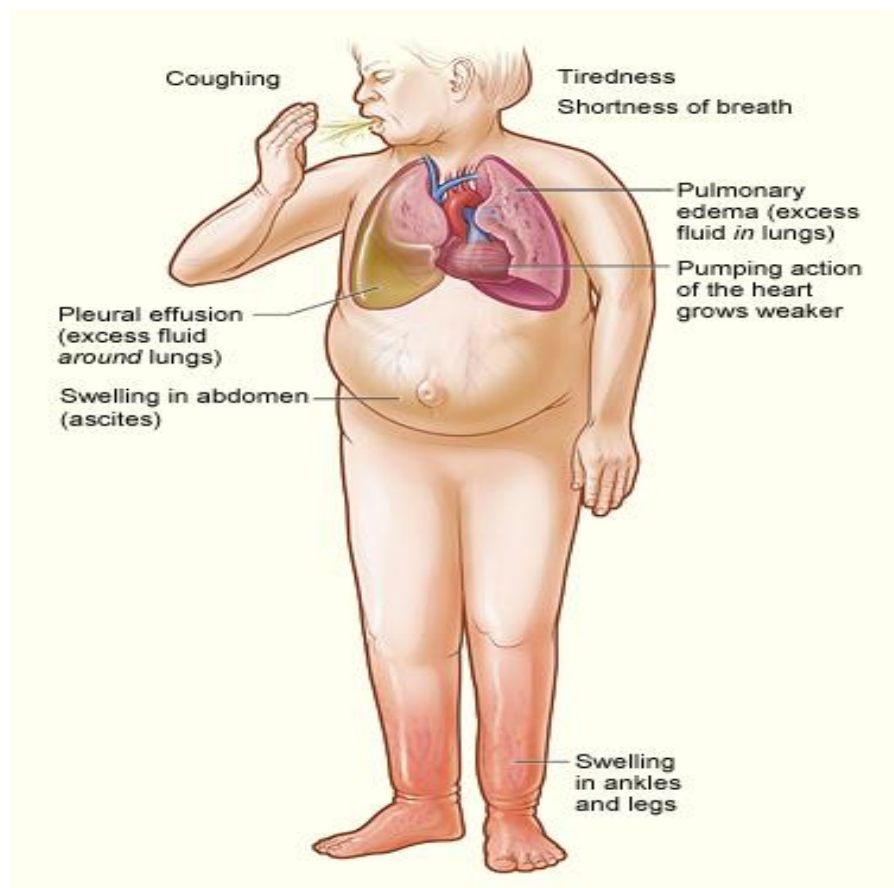


Figure 5. Major signs and symptoms of heart failure (NIH 2015)

Most of the symptoms are attributed to fluid buildup in the body known as edema. Symptoms are often more intense after a physical activity. Patient often experience tiredness, shortness of breath and weight gain, frequent urination and intense cough which could be as a symptom of acute pulmonary edema (Torpy et al. 2011). According to Tansy (2010, 1398), most often signs and symptoms depends on the failed side of the heart. Table below shows signs and symptoms for left and right sided heart failure.

Table 1. Signs and symptoms of ventricular failure (Tansy 2010)

Left-sided failure	Right-sided failure
Shortness of breath	Polyuria (at night)
Oliguria	Pronounced jugular veins
Fatigue	Shortness of breath
Tachycardia	Tachycardia
Weight gain	Fatigue
Faintness	

2.8 Causes and risk factors of heart failure

Health condition such as high blood pressure, diabetes and coronary heart disease (CHD) are known to increase the chances or risk of a person developing heart failure. According to Quinn (2006, 15), the following are risk factors for heart failure: high blood pressure is known to cause an increase in arterial pressure and resistance. This makes the heart to work harder and consequently increasing the heart's workload which eventually leads to poor heart function. Secondly, diabetes damages the heart muscles and it is a risk factor for coronary heart disease. Last but not the least, coronary heart disease, this causes the arteries in the heart (coronary arteries) to become constricted or narrowed as a result of fatty cholesterol deposit, causing inadequate supply of blood and oxygen to the heart. This can result in shortness of breath and heart failure (Johnson and Lehman 2006, 2-3). Framingham heart study revealed that the most common risk factor of heart disease is hypertension. In Framingham and Olmsted study, hypertension HTN has high prevalence of above 50% than other risk factors as shown in the graph below. Other risk factors are myocardial infarction, diabetes, left ventricular hypertrophy and valvular disease (Jessup and McCauley 2008, 4).

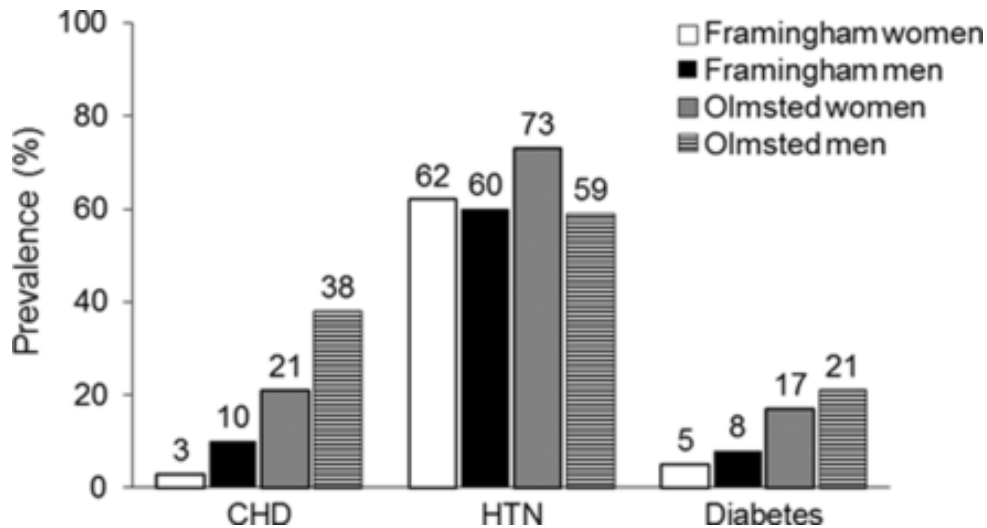


Figure 6. Prevalence of risk factors in heart failure (Roger 2013).

2.9 Tests and diagnosis

Heart failure diagnoses are carried out by a specialized medical practitioner. It comprises of a holistic patient health review such as patient medical history, patients symptoms, lungs congestion assessment, assessment of physical activity under observation, assessment for fluid retention (edema) and also assessing risk factors such as Coronary artery diseases, high blood pressure, and diabetes. According to tansy (2010 1399), heart failure can be diagnosed using different test methods such as Blood tests. This helps to check for any possible diseases in the thyroid, kidney or liver, which can cause heart problems (NT-proBNP). N-terminal pro-B-type natriuretic peptide is a chemical checked in the blood. When the heart is under stress BNP is secreted into the blood stream. Hence an increased level of BNP is detected by the test. Chest X-ray is a photographic image test, which helps doctors explore the condition of a patient's lungs and heart. This reveals any fluid buildup in the body. Electrocardiogram (ECG) test determines a patient heart rhythm or the extend of heart damage as a result of a heart attack through an electrical activity called impulse placed on the patient's skin. These impulses are transmitted and recorded as waves patterns displayed on a monitor or printed on paper. Echocardiogram is a video image test, which captures patient's heart pumping condition in the case of systolic and diasystolic malfunction. It also helps determine valves malfunction, ejection fraction (EF) and other heart abnormalities. Stress test is carried out to help determine how a patient heart and blood vessel

respond to physical activities or exertion. These enable doctors determine if a patient has CAD and body response to decreased heart pumping ability. Cardiac computerized tomography (CT) scan or magnetic resonance imaging (MRI) is tests used to diagnose heart problems, including causes of heart failure. It is an imaging machine design to capture the images of the chest and heart area (Torpy et al. 2011).

2.10 Treatment

It is important that heart failure condition is diagnosed at an early stage to increase patient treatment effectiveness. Heart treatment comprises of pharmacological and non-pharmacological approach. Non-pharmacological approach as proposed in the Lifestyle Changes (2015), states that patient adherence to health care plan and instruction couple with life style modification will help improve patient functional capacity. According to Patient Handout (2005,30), the doctors conduct a physical examination by listening to patient's heart beat for abnormal sounds, examining the lung for accumulation of fluid, check for body edema in ankle, feet, legs and abdomen, check neck for vein swelling and with this information a tailored health care intervention is developed for the patient. Life style modification changes includes exercising to lose or maintain body weight, smoking cessation to reduce high blood pressure caused to the heart, monitoring of daily fluid intake in case of fluid buildup, eating healthy diet, monitoring of blood pressure, avoiding alcohol and limiting caffeine. In the pharmacological approach according Raman (2008, 16-21), medication used for heart failure patient are; ACE (Angiotensin-converting enzyme) inhibitors which functions by enhancing easy blood flow to the heart. It reduces blood pressure by effectively dilating blood vessels. Drugs include captopril, enalapril, lisinopril and perindopril. Diuretics also know as water pills helps in removing of fluid retention in the body to prevent edema, swelling, breathlessness in heart failure e.g. bumetanide and furosemide (Tansy 2010,1399). Beta-blockers are commonly used in heart failure cases cause by systolic dysfunction by slowing down the heart rate .This results when the left ventricle is unable to supply blood to the body system. Examples of drugs are bisoprolol, carvedilol and nebivolol (Jessup and McCauley 2008, 103). Digoxin

functions by slowing down patient's heart rate thereby increasing the rate of heart muscle contraction. It is commonly used for patient with atrial fibrillation. Anticoagulants works by preventing stroke by inhabiting blood clotting e.g. warfarin. Heart failure may also require surgical treatment options such as: heart valve surgery, angioplasty or bypass, left ventricular assist devices, heart transplantation.

3 PATIENT COUNSELING

Defining patient counseling has been difficult but according to (Bor & Allen 1985, according to Ayers, Baum, McManus, Newman, Wallston, Weinman, & West 2008, 349), counseling arises when a trained health care personnel agrees to offer a professional medical help to a person in the role of client. Counseling is just about helping someone but can be suitably describe as an interactive therapeutic process (Bor, miller, Evans & Gill 2008).

Counseling is a process of helping people learn about health related behaviors and hence incorporate those behaviors into their daily life's (Palmer et al. 1996, 22 according to Dawn 2009, 5). According kapil (2005, 2) counseling can be perceived as personal help tailored to assist a person or patient in solving and managing life problems. Counseling assists in addressing specific problem through increasing patient's decision making to cope with the crises and providing education and insight knowledge. It is obvious that every patient have different health care need and as such it is important that care are tailored to meet specific patients health problem .The main aim of the counseling is to help patient cope or adjust to their current health situation. Also counseling does not only help the patient but also help the family (Bor, Miller, and Evans & Gill 2008). It is important to note that counseling is not different from education rather is an integral part of the total educational programme (kapil 2005, 2).

3.1 Why counseling?

According Bastable (2006, 8), the main purpose of patient counseling or education is to increase patient ability, confidence and competence in self care management and the major goal is to prepare patient and family for independence. Counseling is aimed at improving patient functional capacity and increasing health standard (Bor & Allen 1985, according to Ayers, Baum, McManus, Newman, Wallston, Weinman, & West 2008, 349). Counseling is also aim at increasing patient understanding of their problem, resources and limitation and also builds patient capacity for self improvement, self direction and self education (kapil 2005, x). Studies have

proven that counseling helps people in managing life problem by providing support, encouragement, hope and comfort (Burnard 1998b; Soohbany 1999: 35, according to Dawn 2009, 7).

3.2 The role of the nurses

The role of nurses is to provide not just the patient but also the family members with the proper health information and assistances to transit and become independent in self care management (Bastable op. cit .8). Anxiety and depression are often common in HF patient who feels overwhelm by their condition (Joekes et al. 2007 according to Nicholson 2008, 110). Patient's psychological, psychiatric or physical limitations are factors known to mitigate patient's ability to practice self management. However the extent of patient self management will largely depend on the patient health state, their level of understanding of their condition and the complexity of treatment (Nicholson 2007, 110). So therefore, it is paramount that nurses provide the necessary help and assistance required by the patient to cope with this illness and transition. According to tansy (2010,1399), it is the role of the nurse to provide adequate and proper information about the necessary life style changes required to control heart failure symptom. Information consists of dieting, exercise, medication adherence. Nurses should also pay attention to the psychological effect of the condition on the patient. Providing an effective and efficient communication to both patient and their family is vital part in a patient care process. Patient monitoring, evaluation and documentation are also a key role of nurses.

3.3 Counseling skills

For an effective and efficient counseling, nurses are required to possess proper counseling skills. According to Janet (2005, 3), counseling skills is defined as the ability to carry out a task properly and efficiently. These skills are important to establish a therapeutic relationship between nurses and patient. It is important that nurses have good communication skills because effective communication fosters

healthy relationship. Relationship skills is also paramount because establishing positive relationship enhance patient trust and openness which could eventually yield a successful result .Effective relationship comprises of the nurse's ability to hear, listen, respond and providing effective intervention as required (Soohbany 1999, 39 according to dawn 2009 ,7). According to Richard (2005), for an efficient patient counseling, it is important that nurses possess active listening skill, show empathy, respect and genuineness to patient's condition.

3.4 Process of patient counseling

In bastable book (2006, 10), the author compare education process to nursing process, because each educational process runs parallel to each nursing process. However both processes have different goals and objective. Both processes consist of basic element such as assessment, planning , implementation and evaluation but they vary in the sense that nursing process focus basically on care planning and implementation which is subject to the need of the patient either physically or psychosocially .The goal of this process is attained when the clients psychological and physical need are met, whereas the educational process focuses on patient care planning and implementation which depend on the assessment of learning need of the client, eagerness to learn and learning style. The goal is achieved in this process when there are obvious changes in patient attitude, knowledge and skills.

Nursing process

Appraise physical and psychosocial needs.

Develop care plan based on mutual goal settings to meet individual needs.

Carryout and nursing care intervention using standard procedure.

Determine physical and psychosocial outcomes

Education process

Ascertain learning needs, readiness to learn and learning styles

Develop teaching plan based on mutually predetermined behavioral outcomes to meet individual needs.

Perform the act of teaching using specific instructional methods and tools

Determine behavior changes (outcomes) in knowledge, attitude and skills

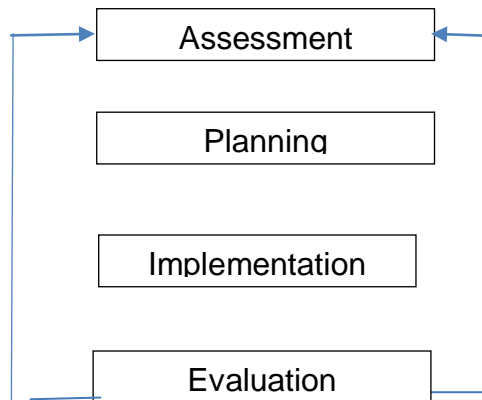


Figure 7. Education process parallels nursing process (Bastable 2006).

According to Bastable (2006, 11), in 1993 Rega proposed a model to enable nurses execute nursing educational process. The paradigm was called ASSURE model meaning : **A**nalyze learner, **S**tate objectives, **S**elect teaching method and instructional material, **U**se teaching method and instructional material, **R**equire learner performance, **E**valuate teaching plan.

3.5 Patient centered approach

According to Smith, Mitchell and bowler (2007, 800), decision about patient care should not based entirely on the health care practitioner. Patient centered care advocate for joint decision making and shared responsibility between the health professional and the patient. In this approaches individuals perception, life experience, autonomy and beliefs are acknowledged. Patient centeredness suggests

care plan based only on a patient's specific health care need. (Valimaki & Kilpi according to Smith et al. 2007, 801). Boyde, Tuckett, Peters, Thompson, Turner and Stewart (2009, 2031), defined centered patient education as an active tailored care process, focusing not only on knowledge but also aimed at achieving a positive health result through enhancing adaptation and behavioral changes. In traditional system of education, patient health care need was solely based on care provider decision rather than the need identified by the patient (Falvo 2004 according to Boyde et al 2009, 2031). Studies have shown disagreement between patient and nurses perception of the required educational need for patient with HF, however effective centered patient care approach can be more effective and productive. According to Falvo (2006, 35), to achieve patient centered teaching, health professional need to develop a personal patient understanding by collecting all necessary patient information in order to provide tailored patient intervention.

Table 2. Summary of the differences between standard format education and patient-centered education (Smith et al. 2007).

STANDARD FORMAT EDUCATION	PATIENT- CENTERED EDUCATION
<ul style="list-style-type: none"> • Teacher/ educator centered 	<ul style="list-style-type: none"> • Individual centered.
<ul style="list-style-type: none"> • Format of topics planned within a curriculum externally to individual 	<ul style="list-style-type: none"> • Format planned by individual through prioritization of topics within curriculum.
<ul style="list-style-type: none"> • Covers topic in sequential order 	<ul style="list-style-type: none"> • Covers topics according to individual prioritization.
<ul style="list-style-type: none"> • Individual concerns and issues not explicitly identified or acknowledged before commencement of education session. 	<ul style="list-style-type: none"> • Individual concerns and issues identified and acknowledged before education commencement session.

3.6 Tailored Counseling for heart failure patient

American heart failure guideline emphasizes the importance of patient education in regard to understanding heart failure, care intervention coupled with medication and patient follow up approach (American heart foundation 2010 according to Gil-

mour, strong, Hawkins, Broadbent & Huntington 2013, 8). Table below show a list of component required for an effective care intervention for HF patients.

Table 3. Heart failure (European Society for Cardiology, 2012)

Table2. characteristics and components of cardiac rehabilitation program for people with heart failure	
Characteristics	<ul style="list-style-type: none"> • Should have a multidisciplinary approach • Should target high risk symptomatic patients • Should include competent and professionally educated staff
Components	<ul style="list-style-type: none"> • Optimized medical and device management • Adequate patient education • Patient involvement in symptom monitoring and flexible diuretic use. • Follow-up after discharge with regular clinic and/or home visits, telephone support or telemonitoring. • Increase access to health care. • Assessment and response to increased weight, nutritional status, functional status, quality of life and lab reports. • Access to advanced treatment options. • Provision of psychosocial support to patients, family and/or caregivers.

According Christopher (2008, 109), patient often ask several question after been diagnosed with heart failure. Question such as what does heart failure means? What caused it? What are the possible treatment and cure? What is the possibility of living healthy life and having a future with the condition? For effective intervention with better outcome and minimal risk, it is importance that patient education is provided to compliment the pharmacological approach of treatment because both intervention strategies are aligned to each other. The table below provides list of non -pharmacological treatment approach.

Summary of non- pharmacological treatment	
Education	About the condition, self management and monitoring
Information	Driving, sexual relation, Immunization, welfare right support groups
Lifestyle	Exercise, diet, water and salt, smoking and alcohol, sleeping, stress

Figure 8. Summary of non pharmacological treatment (Christopher 2008, 109).

In 2010 Department of Health in U.K came up with a programme called cardiac rehabilitation program for patient with heart failure. Patient education on lifestyle modification and self management should be the goals of treatment for HF patient because of the chronic nature of the illness. Patient should be educated on the following topic; reduction of salt intake, minimize consumption of saturated fats and cholesterol intake, reduction in fluid and alcohol intake, self monitoring of weight, compliance with recommended exercise, smoking cessation, compliance with medication as prescribed, maintain hospital appointment. The table below highlight essential and comprehensive health care topic for HF patients.

Table 4. Essential education topics for HF patient (Conway 2015).

Table 4. Essential education topics	
Definition of heart failure	Understanding the cause of heart failure and why symptoms occur.
Prognosis	Understand prognosis and make informed choices.
Symptoms and monitoring	<ul style="list-style-type: none"> Record daily weight and recognise rapid weight gain. Know how to contact health-care provider. In the case of interesting dyspnoea or oedema or sudden weight gain(2kg in 3 days), patients increase their diuretic dose and/or inform their health care team Use flexible diuretic therapy.
Medication Advise	<ul style="list-style-type: none"> Understand medication doses and side effects Understand why they are taking them
Concordance	<ul style="list-style-type: none"> Understand the importance of following treatment instructions Motivate to encourage adherence Sodium restrictions may help patients with symptomatic heart failure classes III and IV
Diet	<ul style="list-style-type: none"> Avoid excessive fluid intake. With severe heart failure, consider fluid restriction of 1.5-2 litres a day. Monitor and prevent malnutrition Eat health and keep a healthy weight
Alcohol	<ul style="list-style-type: none"> Modest intake of alcohol: 2 units a day for men, and 1 unit a day for women Patients with alcohol induced cardiomyopathy should be advised to abstain from alcohol
Smoking and drugs	<ul style="list-style-type: none"> Stop smoking and./or taking illicit drugs Always check with the pharmacy when buying over-the-counter remedies or herbal medicine.
Exercise	<ul style="list-style-type: none"> Understand the benefit of exercise Take regular exercise Be reassures and comfortable about exercise.
Travel and leisure	<ul style="list-style-type: none"> Prepare travel and leisure activities according to physical capacity Carry a written report of medical history and medication. Monitor and adopt fluid intake during flight and in hot climates Beware sun exposure and some medications (amiodarone).
Sexual activity	Sex is safe but problems should be discussed with a health professional
Immunization	Influenza and pneumococcal disease immunization according to local guideline and practice.
Sleeping and breathing disorder	Recognize preventative behavior, such as reducing weight in obese patients and smoking cessation.
Psychosocial aspects	<ul style="list-style-type: none"> Understand that depressive symptoms and cognitive dysfunction are common in patients with heart failure. Importance of social support. Learn about treatment options.

3.7 Benefits of counseling for patient with heart failure

Thompsons study in 1990 revealed a significant benefit to patient and their relative when nurses conducted an in-hospital counseling programme in a coronary care unit (Dawn 2009, 10). According Bastable (2006, 9), counseling increase customer satisfaction, improve patient quality of life, enable patients take more responsibility for their own life, increase patient ability to manage chronic nature of HF, provides patient with the opportunity to chose healthier lifestyle. According Muma and Lyons (2011, 3), counseling can lead to reduced healthcare cost. It also helps decrease patient anxiety, reduces complication of illness, promote adherence to treatment plan, and maximize independence in the performance of activities of daily living.

4 THE AIM, GOAL AND TASK OF THIS THESIS

4.1 Aim / Purpose

The purpose or aim of the research is to describe how to educate patients on the health implications associated with heart failure and self-care management

4.2 Objective/Goals

To improve and maintain patient functional capacity and well-being by managing and controlling risk symptom and life style modification.

4.3 Research task

The research task will be to evaluate the effect of counseling on heart failure patient in regards to patient's quality of life, patient adherence or compliance, re-admission rate and health cost.

5 SYSTEMATIC LITERATURE REVIEW

According to Wilson (2013), systematic literature review examines a comprehensive and detailed analysis of different literature of a specific topic by systematically searching, identifying and summarizing all collated information. A literature review is based on identifying, evaluating, selecting and synthesizing of all relevant research information pertaining to the research question. Its uniqueness and credibility borders on providing health care professional or readers with the opportunity to make an informed decision on health care practice (EPB), through researched fact analysis and synthesized information.

5.1 The steps in a systematic review

To carry out an efficient and prudent systematic review, it is important that the researcher adopts the necessary step involved in a systematic review to eliminate biasness (Booth, Papaioannou & Sutton 2012, 28). The following systematic process was adopted in this study in obtaining evidence based information and data syntheses.

First, an important question was framed “counseling patient with heart failure”. The research question was clear, understandable and very relatable globally. Secondly an extensive search for identifying relevant studies was carried out. Resources were obtained both from e-sources and printed materials. Based on the research question, selection criteria such as inclusion and exclusion approach were used to achieve a better result. Thirdly, at every step of the review an extensive quality assessment was carried out. The relevant studies were evaluated and critically appraisal using a checklist guide. Fourthly, the evidence information was summarized via data synthesis to provide a clear answer to the research question. Finally, findings were communicated or interpreted in a clear and understandable manner that will engage with the users of the research. Also risk of bias and heterogeneity was explored. Proper referencing was accorded to relevant researched information obtained.

5.2 Literature search

The research study was based on a systematic literature review. The study was carried out using the following data base such as Cinahl with full text (Ebsco), E-books, SeAmk Finna, Google books. Validity and reliability of the information were based on the research method. Research words used are heart function, heart failure and patient counseling, education for heart failure patient.

5.3 Data screening

The research comprises of a range of sources such as E- books, online article and journals, printed books and online publication. The researched information was limited to the published year from 2005 to 2016. Information was sourced primary in English. Reviews were screened by reading first through various abstract to find best suited information. Some search information was available and free while some required registration for assessment. Inclusion and exclusion criteria were also used to limit the extent of result obtained.

Table 5. Inclusion and exclusion criteria

Inclusion	Exclusion
Adult>65 years	Children and adolescence
Review from 2005-2016	<2005 was not reviewed
Holistic study	Not limited to a specific region
Source of language is English	Reviews in other language
Full text	Non full text
Evidence base research	Non evidence base research

Information was source separately at first and later in as a combination of word. Research began with heart function. Then proceeded to search for heart failure, patient counseling and counseling patient with heart failure. At every stage inclu-

sion and exclusion criteria were used to limit the extent of result obtained. Full text criteria were also use to limit research result and also abstract were quickly read to obtain the best relevant and suitable result.

A total search result of 33578 data was obtained. This result consists of printed book, E- books, article and journals, publication. At the end of the search process, 32 relevant information results were obtained and seen useful.

In the Cinahl with full text (Ebsco) data base, an initial data result of 26, 452 were obtained; using inclusion and exclusion criteria, specific target question and abstract content review, a data result of 12 were relevant. In E- books data base, an initial search result 7105 was obtained; using inclusion and exclusion criteria, specific target question and abstract content review, a document result of 14 were relevant. In seAmk finna an initial result data result of 20 was obtained; using inclusion and exclusion criteria, a data result of 5 was relevant. One printed book material was also found relevant, resulting to a total of 32 relevant information obtained.

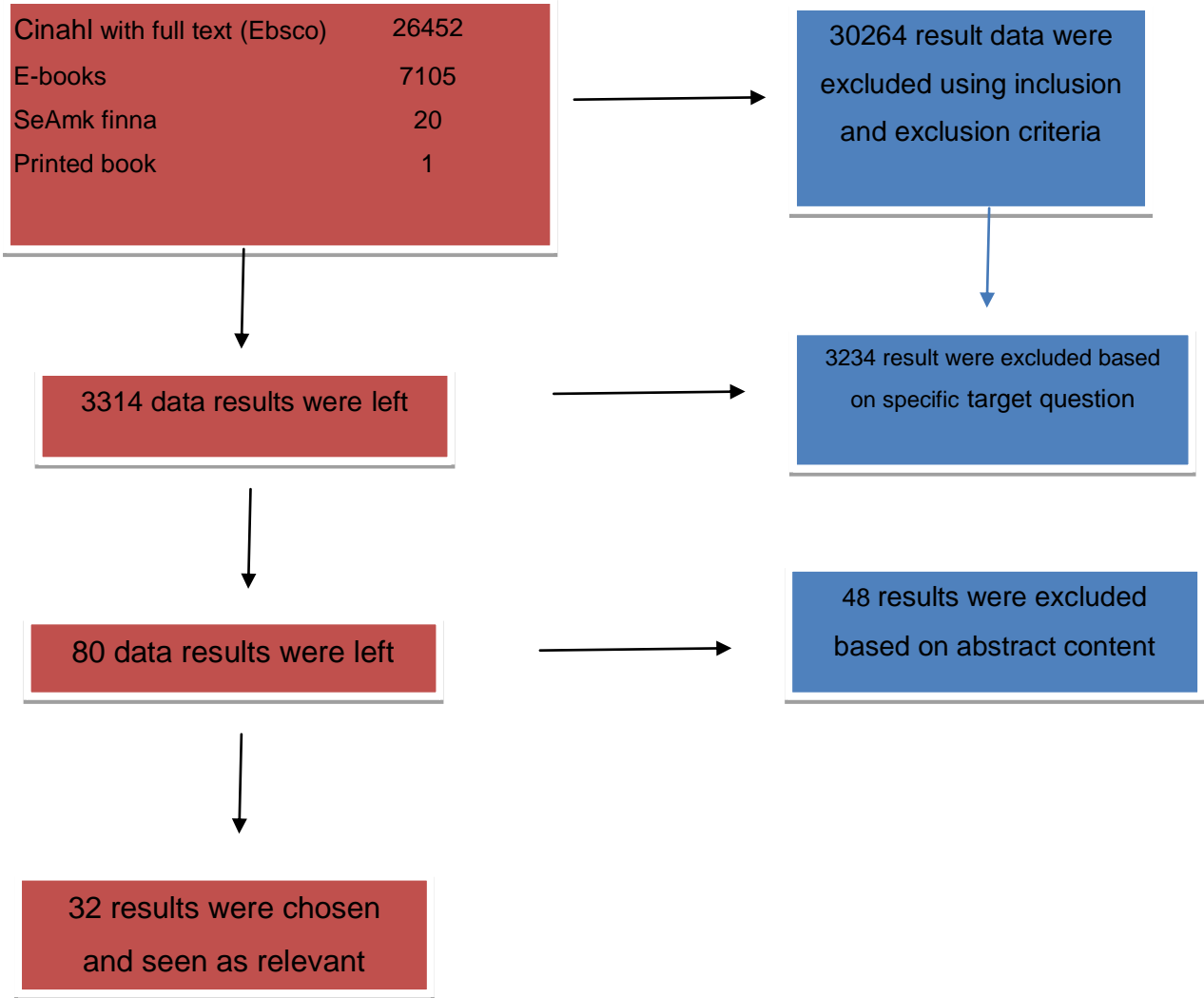


Figure 9. Study search process.

6 DATA ANALYSIS PROCESS

6.1 Inductive content analysis

According to McGrath, Polit and Beck (2010, 324), inductive content analysis consist of collation of relevant information for a specific topic of interest. After several reading and analysis of the reviewed hypothesis, the researcher seeks for a pattern in the information and hence proceeds to develop a theory to explain the pattern. Inductive approach progresses from a specific to a more general level of focus (Waltz, Strickland & Lenz 2010, 282).

In this research study, information was collected by critically reviewing several relevant evidence based research study from credible and reliable sources. It was establish that heart failure is a global health issue with high cost of medical resources and also with a low occurring prognosis. Patient counseling proved to be very important in heart failure management. Several reviewed studies showed that informed and educated heart failure patient exhibited tremendous improvement in their life style modification and self care management. As a result of this, patients QOL ad compliance were improved and consequently reducing patients cost of care and rate of re-admission. Patient self management and life style modification ability consist of weight monitoring, dieting, and exercise, observing and monitoring body symptoms, compliance to medication regimen, smoking and caffeine cessation etc. In theory, it is fair to say that patient education is effective in improving patient's functional, emotional, psychological capacity.

The diagram below shows different stages of inductive content analysis for the research study. The stages progressed from specific focus to a more general focus and finally a theory or result was generated.

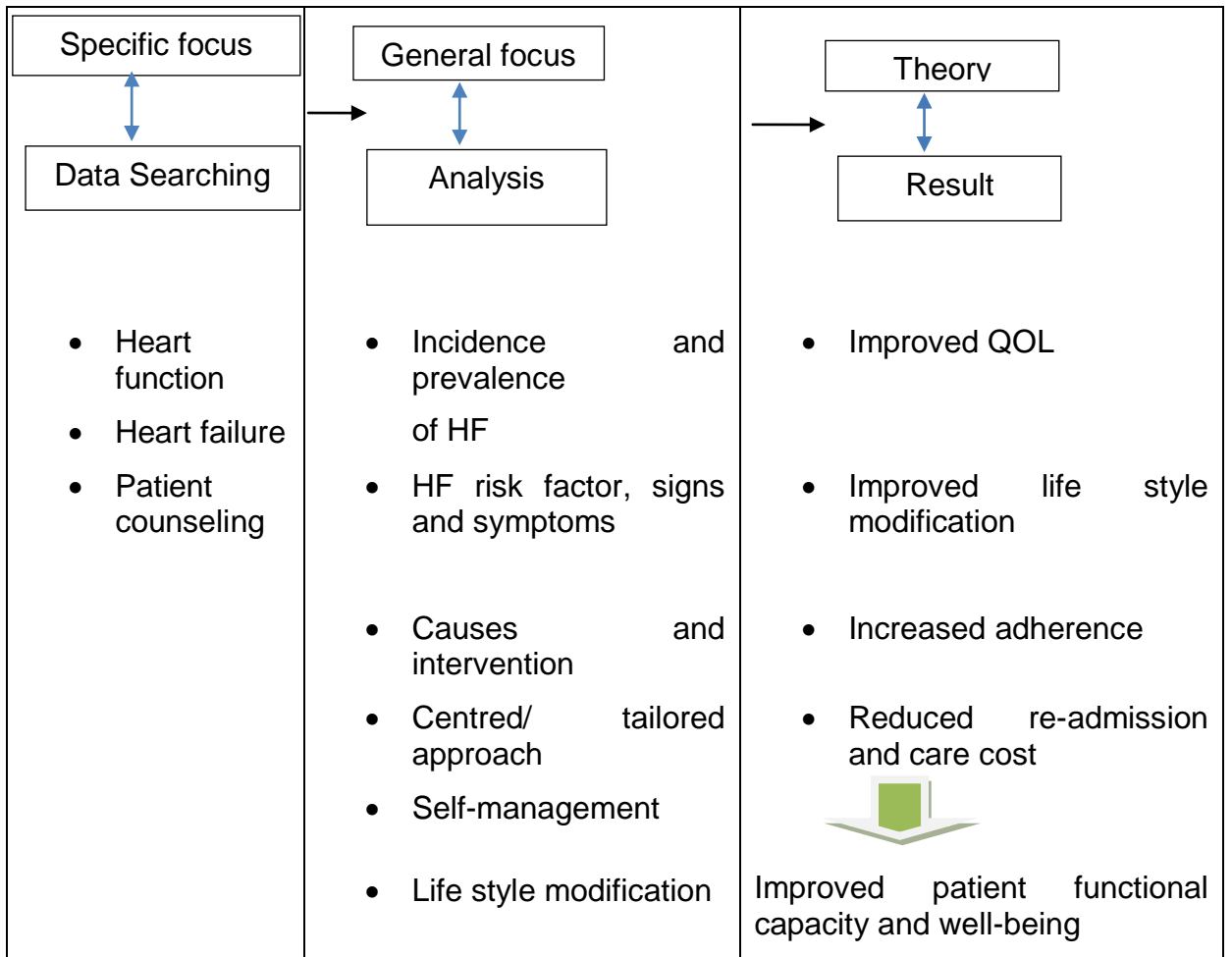


Figure 10. Inductive content analysis of HF patient

7 RESULT

7.1 Evaluating the effect of patient counseling on heart failure patient

This chapter will be evaluating the effect of patient counseling on heart failure patients in regards to patient's quality of life, patient adherence or compliance, rate of re- admission and health cost.

In 2006, Kutzleb and Reiner analyzed the impact of direct patient education on the quality of life and functional capacity of heart failure patient. The study focused on patient self management and monitoring. Patient QOL was defined in the study to consist of an overall patient functional capacity, social and emotional performance. It emphasize on patient capability of living a satisfied life (Dracup, Walden, Stevenson, and Brecht (1992 according to Kutzleb and Reiner 2006, 117). While functional capacity on the other was defined as patient's physical and mental ability to carry out daily life activities (Wenger 1989 according to Kutzleb and Reiner 2006, 117). These functions comprises of patient self management ability, ability to sleep and rest properly, ability to move and work independently etc.

From the research it can be deduced that proper pharmacotherapy with adequate patient education has reduced the rate of hospitalization, morbidity and mortality rate of patients and also improved the QOL for heart failure patient. In the study, patient QOL was alined to patient's re-admission rate because an improvement in patient QOL automatically reduced patient re-admission rate and also cost of care. Patient education on symptom management also revealed that patients who participating actively in the management symptom program are expected to show more improved result then patient who did not participate. The study showed that participants were able to show self management abilities such as monitoring of sodium intake, daily documentation of weight and compliance with medication regimens.

Furthermore, research finding proved that patient readmission rate was reduced by nurses providing adequate patient educational intervention and training coupled with patient monitoring and follows up. Patient education also focused on treat-

ment compliance from patient and also training in early detection of warning signs and symptoms. This has significantly minimized patient crises. In nutshell, the study showed that patient education strategy has significant impact on patient QOL, compliance, functional capacity and also showed a reduction in re-admission rate for patients with heart failure

In USA alone it is estimated that from 1990 -1999 approximately 810 000 to 1 million people are hospitalized annually and also in 2001, nearly 53000 patients are presumed death from HF as the primary cause (Chaniotis & Chaniotis 2012, 1). AHA in 2012 estimated that over one million people are hospitalized for HF illness (Roger, Go & Jones et al. 2012).

According Kutzleb and Reiner (2006, 88), heart failure is responsible for approximately 5% of all hospital admission, with high cost of care during the period of hospitalization. A HF study estimated that 30 - 130 of 1000 individuals above the age of 65 year and 80 -160 of 1000 individual above the age of 75 years had heart failure. As the number of people with heart failure prevalence increases consequently the cost of treatment also increase. The annual cost of diagnosing and treating heart failure budgets for approximately 38 billion dollars making it the most expensive health care problem in the U.S (Basile 2001 according to Kutzleb and Reiner 2006 117). According (Tansey, 2010 1396), proper evidence base rehabilitation and education process for heart failure patient has proven to be cost effective, it showed a significant improvement in patients quality of life, reduction in hospitalization and also provided continuity of care.

According to the study by Harrington (2008, 13),in the assessment of effectiveness in the management of heart failure, the study revealed significant improvement in patient quality of life ,decreased hospitalization rate. In Harrington's study, an assessment guideline was initiated with comprises of monitoring tailored patient care intervention, evaluation and continuous patient education. A study by O'Connor et al in 2009 on the effect of counseling HF patient on exercising showed an 11% reduction in re-admission rate (Conway 2015, 168).

In 1995 Rich et al. carried out a randomized trail examining the effect of nursing education on dieting, medication, follow up, rate of readmission, QOL and cost of

care of HF patient within a period of 90 days. The result of the research revealed a non re-admission success rate of 91 out of the 142 patient who followed the multidisciplinary care programme when compare to a conventional care with a result of 75 out of the 140 patients. Patient care cost rate was reduced by \$460 per patient as a result of subsequent reduction in the re-admission rate of patient.

McDonald et al. (2002), study on patient with stage IV heart failure, compared the benefit of multidisciplinary care (MDC) of heart failure patients with routine care (RC) while emphasizing on the importance of patient education. Result showed that 25.5% of patient died in the routine group compare to the (7.8%) in the MDC group. RC group showed a far higher rate of re-hospitalization for heart failure compared to 3.9% of MDC group. In 2006 Kutzleb and Reiner (2006, 117), carried out a study by creating two groups NC and RC. NC group participating in direct multidisciplinary intervention and RC participating in routine care within the period of 9 month. The study revealed significant (36%–50%) improvement for patients QOL in NC group compare to RC group, patient in the NC group also showed a 62% significant improvement on health and functional capacity compared to RC group with a 25% improvement. The NC showed an overall 73% progressive improvement compared to 9% increase in RC. HF is known to have a significant impact on patient QOL and functional capacity. However nurse tailored patient counseling approach can reduce readmission rate, improve patient QOL, increase adherence and consequently reduced cost of medical care.

In 2011, Otsu and Moriyama carried out a study parameter based on medication compliance, activity and exercise compliance, sodium-restricted diet compliance, compliance with smoking and drinking cessation, self monitoring of weight and symptoms deterioration (body edema, night cough, dyspnea, shortness of breath). The study revealed an increase in medication compliance, activity and exercise compliance, sodium-restricted diet compliance and self monitoring competency and also an increase in patient's quality of life over a period of 6 month. The study showed an effective improvement in patient self monitoring and management behavior and lifestyle modification. This resulted in an improved symptoms and risk factor management and in turn enhance patient QOL.

8 DISCUSSION AND CONCLUSION

Heart failure is a chronic illness and patient have to live with the condition for the rest of their life. Medication is important but patient counseling goes a long way in improving patient health standard. From the review, patient counseling focused on patient self management and life style modification. Patient need to be educated or informed about their health condition and the necessary measure required to maintain a healthy life. Patient who practiced self management care showed a low risk of developing health complication.

From the study, it was gathered that patient health standard and functional capacity was improved via patient counseling. Patient who participated in evidence base care programme which comprises of medication and counseling intervention show enhanced improvement in QOL, compliance and a lower cost of care and re-admission rate. Also patients who complied with the necessary life style modification such as exercising, smoking cessation, reduced fluid and sodium intake also showed an improve health level. Patient's re-admission and cost of care parameter practically depends on patients QOL and compliances. Hence an Improved patient QOL and compliance automatically reduces the rate of admission and also cost of care. So therefore, it is important that nurses continue to educate patient on self management and life style modification.

In summary, the overall study shows a positive effect of patient counseling on HF patients. Counseling empowered patients to develop confidence in practicing self care management and making necessary life style adjustment which in turn improved patient functional capacity and well being.

8.1 Ethics and reliability

Ethics in a research study is paramount because it guides researcher behaviour during a research study. This is important because the quality, standard and reliability of the study depends on the amount of ethical principle complied with by the researcher. According to wulf (2012, 141), it is important that the research outlines all procedure adopted in the research process. This provides subsequent re-

searcher guideline or pathway to following in course of repeating the same study (Wulf 2012, 141). A research work is reliable if results are consistent when replicated by several authors (kirk and miller 1996 according thyer 2010, 335). It basically provides the same result when other researchers embark on the same study.

To ensure the ethic and reliability of the research, series of measure were taken to eliminate biases. Information was carefully sourced from reliable data base. Seamk University information data base was used (Cinahl with full text (Ebsco), E-books, SeAmk Finna, Google books etc.). Some of the database used in this study required registration to access necessary information while others could be accessed freely.

Information obtained in this research process were properly read and paraphrased in the researchers own word and understanding while maintaining the meaning of the content of the original sentence or sentences and also proper referencing were according to the authors to eliminate plagiarism. However paraphrasing was not done in sentences that could utter the meaning of the entire sentence content. Data, figure, and table in this research work was represented exactly from the original author with proper referencing accorded.

Systematic literature review and its various stages were used in data sources, analysis, and reporting. Inclusion and exclusion criteria were used to limit the data result which relevant data were obtained. This process helped shape and provided a direction for the entire research study. Inductive content analysis was used to answer the research task question. Analysis progressed from specific study to a more generalized theory. Research result was gathered from an evidence base research study. Researched studies consisted of several randomized trials carried out in close observation within a specific period of time.

8.2 Limitation

The study was limited both resource and time wise. Some relevant information could not be assessed because it required financial payment allowing the writer make do with free material only. Time constraint posed a problem because of other tight school schedule. Language limitation was also present during the research process because information was only sourced in English

8.3 Practical Implementation of the study

The research study is relevant and applicable to both nurses and patients. The study outlines the benefit of counseling HF patients. Nurses should always provide counseling (non pharmacotherapy) to HF patient to compliment the medication (pharmacotherapy approach) in other to achieve a better result and build patients confidence in self care management. There are guidelines in this research study Table 3 and Appendages to assist nurses in assessing, counseling and evaluating patients with HF effectively and efficiently.

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APPENDICES

APPENDIX 1. Heart failure Term and definition

APPENDIX 2 Component of health care clinic

APPENDIX 3 HF Treatment procedures

APPENDIX 4 Treatment procedures and Screening Tools for Direct Caregivers

APPENDIX 5 HF Patient education rating form Treatment procedures

Dyspnea	Shortness of breath or increased effort in breathing, either at rest or with activity (Dains & Scheibel, 2003).
Edema	The bilateral accumulation of fluid in the tissues, commonly known as swelling and typically worse in the evening (Dains & Scheibel, 2003).
Heart failure	A complex clinical syndrome that can result from structural or functional cardiac disorder that impairs the ability of the heart to pump or eject blood (Hunt et al, 2005).
Orthopnea	Inability to breathe except when sitting up (Dains & Scheibel, 2003).
Orthostatic hypertension	A drop in blood pressure on standing suddenly or changing positions, accompanied by dizziness or fainting, recognized by a drop in the systolic blood pressure of more than 16mmHg (Dains & Scheibel, 2003).
Paroxysmal nocturnal dyspnea	Sudden attack of shortness of breath (dyspnea) that occurs when sleeping. Characterized by sudden awakening, grasping for breath, and attempting to sit up or get out of bed to relieve the symptom (Dains & Scheibel, 2003).

Heart failure Terms and definition (Harrington 2008)

Disease Management	<p>Key components to disease management program include:</p> <ul style="list-style-type: none"> Comprehensive education and counselling. Focus on self-care Effective medical therapy through increased compliance. Resources to ensure necessary follow-up is completed. Available social/ financial support Adequate provide resources to meet patient populations needs. Ability to integrate and coordinate care among all providers in care continuum.
Functional Assessments	<p>The HFSA recommends utilizing three functional assessments:</p> <ul style="list-style-type: none"> New York Association Class function status assessment on every visit. 6MWT done at baseline and during risk assessments. Cardiopulmonary exercise testing to set a baseline
Quality of Life Assessment	<p>A quality-of-assessment should be completed and documented at baseline and when there is a change in patient status. Quality-of-assessment tools should include assessment of symptoms, functional status and health-related quality of life.</p>
Medication Therapy and Drug Evaluation	<p>Medication therapy and drug evaluation should include :</p> <ul style="list-style-type: none"> Medical therapy that follows established HF medication guidelines (one of which is put forth by the HSFA). Assessable documentation giving reasons why a patient is not following HF medication guidelines. Properly patient-managed diuretic utilization when appropriate. Drug evaluation by HF nurse, physician, or pharmacist that is repeated as indicated. System that identifies patients who are not receiving ideal medication therapy.
Device Evaluation	<p>A process in place to evaluate and document evaluation of patients who may be candidates for implantable cardioverter defibrillators and biventricular pacing devices. Also, there should be a process for patients who have a device that includes a registry, a system for evaluation, care coordination with electro physiologists and a system in place to address alerts and recalls of devices.</p>
Nutritional Assessment	<p>Ensure patients receive nutritional assessment and education with a focus on managing patients with co-morbidities. A system for nutritional assessment should include but not limited to nutritional screening, evaluation, and plan of care development by dietician with expertise in heart failure or other practitioner with nutrition and HF expertise as well as a system to measure and track nutrition metrics such as body weight and body mass index regularly.</p>
Follow-up	<p>There should be adequate and standardised follow-up for patients. After discharge, patients should have clinic follow-up visit within 7-10 days. Also patients should be scheduled to the clinic within 12 months after initial clinic visit.</p>

Advance Planning	Advance planning is a process where the patient can determine both medical and non-medical care he/she will receive before the condition precludes him/her from making these decisions. It is a dynamic process that must be revisited frequently and modified based on a patient's wishes and documented appropriately in patient's record.
Communication	There should be documented and frequent open communication between patient and provider as well as between providers in different settings.
Provider education	Mechanisms should be put in place to ensure provider competencies are updated regularly through training, continuing education, and provider practice assessments.
Quality assessment	Quality assessment of HF care should be measured by outcomes (retransmission rates, survival), processes (proper weight tracking, patient education), and structural components (registries, proper reporting to regulatory bodies).

Component of HF health care clinic (Hauptman et al., 2008)

Goals of treatment of HF	Your doctor may prescribe several medications to help improve heart functions:
<p data-bbox="233 338 738 416">Adjust your lifestyle with the following steps:</p> <ul data-bbox="233 443 738 987" style="list-style-type: none"> • Reduce salt, saturated fat and cholesterol intake • Limit the amount of fluids and alcohol that you drink • Weigh yourself each day and inform your doctor of any sudden weight gain • If overweight, lose weight • Exercise as recommended by your doctor. • Quit smoking • Take medications as prescribed • Keep your doctor's appointment • Ask your doctor about a flu shot and pneumonia vaccination 	<ul data-bbox="794 443 1559 730" style="list-style-type: none"> • Diuretics (water or fluid pills) to reduce fluid build-up in your legs and foot and ankle swelling. • ACE inhibitors to lower your blood pressure and to help reduce heart attack risk. • Beta blockers to slow your heart rate and lower your blood pressure • Digoxin to strengthen your heart so that it can pump more blood. <p data-bbox="770 779 1559 965">Talk with your doctor if you can notice any problem with your medications (taking several medications at the same time may cause them to interact and create unwanted side effects).</p> <p data-bbox="770 981 1559 1111">Also tell your doctor before taking any new medication, including over-the-counter medications and dietary herbal supplements.</p>

HF Treatment procedure (Geriatrics 2005)

A N-E-W L-E-A-F

Screening Tools for Direct Caregivers

- A: Acute agitation/anxiety
- N: Nighttime shortness of breath or increase in nighttime
urination
- E: Edema in lower extremities
- W: Weight gain (2-4 pounds per week)
- L: Lightheadedness
- E: Extreme shortness of breath lying down
- A: Abdominal symptoms (nausea, pain decreased appe-
tite, distension)
- F: Fatigue

Screening Tools for Direct Caregivers (Harrington 2008)

Patient -----Rater-----Date-----									
Instruction: Rate the patient performance in each of the following areas where appropriate; mark the narrative descriptors in the left column. Circle one number in the right column for each category									
	Weak					Outstanding			
1. OPENING THE INTERVIEW	1	2	3	4	5	6	7	8	9
Putting the patient at ease Use of social amenities Eye contact Professional demeanor Layout of plan	Notes:								
2. DISCUSSION OF DISEASE	1	2	3	4	5	6	7	8	9
Access what patients know Assess patients attitudes/feelings Report lab findings Explain pathophysiology Correctness of information Assesses patients final understanding	Notes:								
3. TREATMENT	1	2	3	4	5	6	7	8	9
Present complete plan Present treatment goal Explain side effects/complications Treatment individualized to patient Correctness of information Assess patients final understanding	Notes:								
4. ASSESSMENT OF PATIENTS UNDERSTANDING OF DISEASE AND TREATMENT	1	2	3	4	5	6	7	8	9
Assesses patients compliance Assesses patients attitude Allows for question Flexible in presentation	Notes:								
5. APPROPRIATE USE OF COUNSELLING TECHNIQUE	1	2	3	4	5	6	7	8	9
Tried to clarify patients statement Reassurance and empathy	Notes:								

<p>Appropriate use of silence Appropriate vocabulary Use of open-ended questions Facilitative behavior Use of notes Use of educational aids Flexible Good use of probes Overall physical appearance Appropriate use of patient background Makes clear the next step for patients Asking for question</p>									
<p>6. OVERALL EFFECTIVENESS OF CONDUCTING PATIENT COUNSELLING</p>	1	2	3	4	5	6	7	8	9
<p>Rapport building Discussion of disease(pathophysiology) Treatment program Assessment of patients understanding of disease and treatment Use of counselling technique</p>	Notes:								
<p>COMMENTS AND SUGGESTIONS FOR IMPROVEMENT:</p>									

Patient education rating form (Muma &.Barbara 2011)