DISSERTATION ON

A STUDY TO ASSESS THE IMPACT OF MULTIMODAL NURSING INTERVENTION ON TUBERCULOSIS MANAGEMENT AMOMG CLIENTS WITH TUBERCULOSIS ATTENDING GOVERNMENT THIRUVATTEESWARER HOSPITAL OF THORACIC MEDICINE AT CHENNAI.

M.Sc (NURSING) DEGREE EXAMINATION
BRANCH – IV COMMUNITY HEALTH NURSING

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MADRAS MEDICAL COLLEGE, CHENNAI – 600 003

A dissertation submitted to
THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY,
CHENNAI – 600 032

In partial fulfilment of the requirement for the award of degree of
MASTER OF SCIENCE IN NURSING

OCTOBER 2020

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CERTIFICATE

This is to certify that this dissertation titled, **"A STUDY TO ASSESS THE IMPACT OF MULTIMODAL NURSING INTERVENTION ON TUBERCULOSIS MANAGEMENT AMONG CLIENTS WITH TUBERCULOSIS ATTENDING GOVERNMENT THIRUVATTEESWARER HOSPITAL OF THORACIC MADICINE AT CHENNAI"** is a bonafide work done by **S.SAJITHA PARVEEN,** M.Sc., (Nursing) II Year student, College of Nursing, Madras Medical College, Chennai-03, submitted to The Tamil Nadu Dr.M.G.R. Medical University, Chennai in partial fulfillment of requirement for the award of the degree of Master of Science in Nursing **BRANCH – IV, COMMUNITY HEALTH NURSING** under our guidance and supervision during academic period from 2018 – 2020.

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-William James

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ABSTRACT

Respiration is the process by which energy is released from food in our body.The function of respiratory system is to breathe in oxygen for respiration producing enercy from food,and to breathe out carbondioxide.With the help of lungs gases are exchanged between the blood and the air.Gases exchanged are oxygen and carbon dioxide.

Tuberculosis (TB) is a fascinating disease. with molecular evidence going back to over 17,000 years. In spite of newer modalities for diagnosis and treatment of TB, unfortunately, people are still suffering, and worldwide it is among the top 10 killer infectious diseases, second only to HIV. According to World Health Organization (WHO), TB is a worldwide pandemic. It is a leading cause of death among HIV-infected people. In India, historically speaking, fight against TB can be broadly classified into three periods: early period, before the discoveries of x-ray and chemotherapy; post-independence period, during which nationwide TB control programs were initiated and implemented; and the current period, during which the ongoing WHO-assisted TB control program is in place. Today, India's DOTS (directly observed treatment-short course) program is the fastest-expanding and the largest program in the world in terms of patients initiated on treatment; and the second largest, in terms of population coverage. Major challenges to control TB in India include poor primary health-care infrastructure in rural areas of many states; unregulated private health care leading to widespread irrational use of first-line and second-line anti-TB drugs; spreading HIV infection; lack of political will; and, above all, corrupt administration. Multidrug-resistant TB (MDR-TB) is another emerging threat to TB eradication and is a result of deficient or deteriorating TB control program. WHO with its “STOP TB” strategy

has given a vision to eliminate TB as a public health problem from the face of this earth by 2050.

TITLE

A Study to assess the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine at Chennai.

OBJECTIVES

To assess the pretest level of multimodal nursing intervention on Tuberculosis management among clients with Tuberculosis.To assess the effectiveness of intervention on Tuberculosis management among clients with Tuberculosis.To compare the pretest and post test level of impact of multimodal nursing intervention on Tuberculosis management among clients with Tuberculosis.To find out the association between the post test knowledge score with selected demographic variables.

METHODOLOGY

The study was conduct with 60 samples in Quantitative research approach;the study design is Quasi-Experimental Non-Randamaized control group design.Clients with Tuberculosis who are present in Government Thiruvatteeswarer Hospital of Thoracic medicine in Chennai.were selected for the study by purposive sampling.30 samples Pre-existing knowledge was assessed by using semi structured questionnaire containing 30 multiple choice questions.Other 30 samples are go to direct post test.After the pretest,multimodal nursing intervention was given to only 30 samples among clients with tuberculosis.After 7 days post-test was conducted by using same tool.Collected data was analysed by descriptive and inferential statistics.

Frequncy and percentage analysis were used to describe demographic characteristics of the study participants.Pre-test and post

test were compared using paired t test.The association between demographic variables and knowledge score were analyzing using Pearson Chi square test.

RESULT

The results of the study revealed that multimodal nursing intervention on tuberculosis management among clients with tuberculosis had improved the knowledge regarding tuberculosis management among clients with tuberculosis with Indepentdent student t test, $p< 0.01$. There is statistically significance in knowledge attainment on regarding tuberculosis management show impact of multimodal nursing intervention

CONCLUSION

The finding of the study revealed that multimodal nursing intervention on tuberculosis management among clints with tuberculosis attending Govt.Thiruvatteeswarer hospital of thoracic medicine in Experimental group. It gives a great insight to community health nurse and motivates them to arrange health awareness compaign and there by helps to improve the quality of lifestyle and improving knowledge of tuberculosis management.

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LIST OF ABBREVIATIONS

ABBREVIATIONS	EXPANSION
TB	Tuberculosis
CI	Confidence Interval
TBM	Tuberculosis Management
WHO	World Health Organization
SD	Standard deviation
P	Significance
X2	Chi square test
MNP	Multimodal Nursing Intervention
RNTCP	Revised National Tuberculosis Control Programme
Fig	Figures
H1 and H2	Research Hypothesis
DF	Degree of freedom

CHAPTER-I
INTRODUCTION

"Trust is more important than Drugs
If there is no Trust, there is no Treatment at all"
-Hasan Abbas, TB Patient. Musyaf, Syria

In India, Tuberculosis remains a major public health problem. Every year approximately 18- lakh people develop Tuberculosis and about 4 lakh die from it. India accounts for one fifth of global incidence of Tuberculosis and tops the list of 22 high Tuberculosis burden countries. Unless sustained and approximately 20 lakh people in India are estimated to die of Tuberculosis in next five years

TB is caused by bacteria (Mycobacterium tuberculosis) and it most often affects the lungs. TB is spread through the air when people with lung TB cough, sneeze or spit. A person needs to inhale only a few germs to become infected.Every year, 10 million people fall ill with tuberculosis (TB). Despite being a preventable and curable disease, 1.5 million people die from TB each year – making it the world's top infectious killer.TB is the leading cause of death of people with HIV and also a major contributor to antimicrobial resistance.

Most of the people who fall ill with TB live in low- and middle-income countries, but TB is present all over the world. About half of all people with TB can be found in 8 countries: Bangladesh, China, India, Indonesia, Nigeria, Pakistan, Philippines and South Africa. About one-quarter of the world's population is estimate to be infected by TB bacteria. Only 5-15% of these people will fall ill with active TB disease. The rest have TB infection but are not ill

Tuberculosis, also known as TB, is a contagious bacterial infection that can be found nearly anywhere in the body, but is found most commonly in the lungs. This because the bacteria that is

responsible for TB, Mycobacterium Tuberculosis, is transmitted through the air as it does not thrive on surfaces. Although TB has been discovered over 100 years ago, it is still one of diseases that cause the most deaths annually. Tuberculosis(TB) is a communicable disease requiring prolonged treatment and poor adherence to a prescribed treatment increases the risk of morbidity,mortality,and spread of disease in the community.

The World Health Organization(WHO) declared TB a global public health emergency in 1993 and since then intensified its efforts to control the disease worldwide.Tuberculosis control has been accorded a high priority with in the health sector a it is a major public health problems.

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*. Tuberculosis typically attacks the lungs, but can also affect other parts of the body. The disease has become rare in high income countries, but is still a major public health problem in low- and middle-income countries.

It is estimated that between the years 2000 and 2010, eight to nine million new cases emerged each year. Approximately 1.5 million people die from the disease each year. In adults, tuberculosis is the second leading cause of death due to an infectious disease (after AIDS), with 95% of deaths occurring in low-income countries. Tuberculosis is a major problem of children in poor countries where it kills over 100,000 children each year.

The treatment of tuberculosis remains a constraint for patients and a heavy burden for the healthcare system. Drug-susceptible tuberculosis requires at least six months of therapy under close supervision. A treatment for multidrug-resistant tuberculosis requires nearly two years of treatment with poorly tolerated and less effective drugs. In most

places the diagnosis still relies mainly on direct microscopy that is unable to detect a large proportion of patients. The BCG vaccine, developed almost a century ago, confers only partial protection.

After 40 years of minimal progress in the tools to fight tuberculosis there are some reasons for hope. A few new drugs are reaching the final phase of development; a new molecular test that can be decentralized to some extent and allows the rapid diagnosis of tuberculosis and of resistance to rifampicin has been introduced. Though this is undeniable progress, much will be needed to bring the new tools and drugs to the patients in need. Furthermore, a true “point of care” diagnostic test still does not exist and little progress has been made in research for a more effective vaccine.

.Tuberculosis (TB) is a bacterial infection spread through inhaling tiny droplets from the coughs or sneezes of an infected person. It mainly affects the lungs, but it can affect any part of the body, including the tummy (abdomen) glands, bones and nervous system.TB is a potentially serious condition, but it can be cured if it's treated with the right antibiotics.

Tuberculosis (TB) is one of the most ancient diseases of mankind and has co-evolved with humans for many thousands of years or perhaps for several million years. The oldest known molecular evidence of TB was detected in a fossil of an extinct bison (Pleistocene bison), which was radiocarbon dated at 17,870±230 yearsand in 9000, year old human remains which were recovered from a neolithic settlement in the Eastern Mediterranean. Although as early as 1689, it was established by Dr. Richard Morton that the pulmonary form was associated with “tubercles,” due to the variety of its symptoms, TB was not identified as a single disease until the 1820s and was eventually named “tuberculosis” in 1839 by J. L. Schönlein. In 1882, the bacillus causing

tuberculosis, *Mycobacterium tuberculosis*, was discovered by Robert Koch; and for this discovery, he was awarded Nobel prize in physiology or medicine in 1905.Tuberculosis is caused by a group of closely related bacterial species termed *Mycobacterium tuberculosis* complex. Today the principal cause of human tuberculosis is *Mycobacterium tuberculosis*. Other members of the *M. tuberculosis* complex that can cause tuberculosis include *M. bovis*, *M. microti* and *M. africanum*. *M. microti* is not known to cause TB in humans; infection with *M. africanum* is very rare, while *M. bovis* has a wider host range and is the main cause of tuberculosis in other animal species. Humans become infected by *M. bovis*, usually via milk, milk products or meat from an infected animal.It is estimated that in the pre-antibiotic era, *M. bovis* was responsible for about 6% of tuberculosis deaths in humans.

BACKGROUND OF THE STUDY

Tuberculosis (TB) is a major cause of illness even though drugs to cure this disease have been available for the past 60 years. Despite efforts which are invested in the monitoring and treatment of tuberculosis, it remains a major public health problem and 8.8 million case have been estimated in which 1.7 million have died; 27% of these 8.8 million cases and 37% of all deaths were observed from Africa that houses 11% of the world‘s population. Tuberculosis kills someone approximately every 29 seconds, nearly 5,000 people every day, according to World Health Organization.

Tuberculosis occurs in every part of the world. In the year 2010, the largest number of new tuberculosis cases occurred in Asia, accounting for 60% of new cases globally. However, Sub-Saharan Africa carried the greatest proportion of new cases per population with over 270 cases per 100 000 inhabitants in 2010.

The Incidence of tuberculosis (per 100,000 people) in Rwanda was reported at 106.00 in 2010 and was about 123 in 2008 and 115 in 2009. A report from Rwanda Biomedical center (RBC) showed that incidence rate of tuberculosis infections reduced from 63 people per 100,000 in 2014 to 50/100,000 in 2017 4. However, no report that indicated the factors associated with TB knowledge among TB patients in Rwanda.In Gakenke District, the number of TB cases has been increasing from 145 cases in 2015, 157 cases in 2016 up to 3200 cases in 2017.

Tuberculosis (TB) remains one of the major global health threats leading to morbidity and mortality . One in three persons across the world representing 2–3 billion individuals are known to be infected with *Mycobacterium Tuberculosis* (*M. Tuberculosis*) of which 5–15% are likely to develop active TB disease during their lifetime . In 2014, an estimated 9.6 million people fell ill due to TB, around 1.5 million people died from the disease including 1.1 million HIV-negative persons and 400,000 HIV patients . While TB is present in every country majority of TB sufferers live in low income and middle income countries especially in regions such as Sub-Saharan Africa and South East Asia . Over the past decade, significant progress has been made towards TB control with most of the TB targets set as part of the Millennium Development Goals (MDGs) having been achieved .TB mortality for instance has declined by 47% since 1990, with nearly all of that happening in the era of the MDGs. In all, effective diagnosis and treatment of TB has been estimated to have saved over 40 million lives between 2000 and 2014 .While these achievements are remarkable, there are calls for intensified efforts to eradicate the disease. In 2014, the World Health Assembly (WHA) adopted the End TB strategy with targets linked to the newly adopted Sustainable Development Goals (SDGs) .The End TB strategy serves as the key guide for countries to

reduce TB deaths by 90% by 2030 as well as achieve an 80% reduction in TB incidence rate compared with 2015 .TB still pose as a huge threat to economic development as over 90% of TB-related deaths occur among adults in the most productive age groups. Emerging issues such as Multi-drug and extensively drug resistant TB is seen as a major challenge in effective control of the disease in many regions. Treatment outcomes for drug resistant TB are still poor and inadequate reporting remains a growing challenge. Of the 480,000 cases of multidrug-resistant TB (MDR-TB) estimated to have occurred in 2014, only about 25% were detected and reported .Moreover, just around 30% of the over 7,000 MDR-TB patients from 13 countries were successfully treated in 2007 .The evidence base around TB and its management is rapidly changing. In this paper, we provide a general overview of TB by highlighting the pathogenesis, diagnosis, and treatment guidelines. In preparation of this material, we searched PubMed for relevant articles on TB. Additionally, we searched the websites of major institutions like the World Health Organisation (WHO) and the US Centres for Disease Control and Prevention (CDC) for related guidelines and reports. This paper has been written with the intention to offer general education to health professionals, policy makers, patients and the public.

1.1 NEED FOR THE STUDY

"An ounce of prevention is worth of a pound of care"

According to World Health Organization (WHO) in the year 2008estimated incident cases of tuberculosis were 9.4 million in the world[2]. In India, Tuberculosis remains a major public health problem. Every year approximately 18- lakh people develop Tuberculosis and about 4 lakh die due to it[3]. More than 4000 people become newly infected with the tubercle bacilli. More than 5000 develop Tuberculosis disease; more than 1000 people die of Tuberculosis. According to 2007-08 report, in Karnataka, 568 lakh population is covered by

(RNTCP)revised national tuberculosis control proramme.[4] In Gulbarga district, 18 Designated Microscopic Centers are present. 2480 Tuberculosis cases were detected in between January 2008 to October 2008.[5]

The burden of suffering caused by Tuberculosis in India is enormous. worker with Tuberculosis loose on an average about 83 work/day because of the disease, 48 of which are lost while shopping for diagnosis. Considering the 2 million new case reported annually in India, the national loss per year works out to 166 million lost work days at a cost of about $200 million.[6]

In 2017, 10 million people fell ill with TB, and 1.6 million died from the disease(including 0.3 million among people with HIV).In 2017, an estimated 1 million children became ill with TB and 230 000 children died of TB (including children with HIV associated TB).Multidrug-resistant TB (MDR-TB)remains a public health crisis and a health security threat. WHO estimates that there were 558 000 new cases with resistance to rifampicin-the most effective first-line drug, of which -82% had MDR-TB.

Globally, TB incidence is falling at about 2% per year. This needs to accelerate to a 4-5% annul decline to reach the 2020 milestones of the End TB Strategy.An estimated 53 million lives were saved through TB diagnosis and treatment between 2000 and 2017. Ending the TB epidemics by 2030 is among the health targets of the sustainable development goals..

TB remains a leading cause of morbidity and mortality in developing countries, including Bangladesh. With the discovery of chemotherapy in the 1940s and adoption of the standardized short course in the 1980s, it was believed that TB would decline globally. Although a declining trend was observed in most developed countries, this was not

evident in many developing countries . In developing countries, about 7% of all deaths are attributed to TB which is the most common cause of death from a single source of infection among adults . It is the first infectious disease declared by the World Health Organization (WHO) as a global health emergency . In 2007, it was estimated globally that there were 9.27 million incident cases of TB, 13.7 million prevalent cases, 1.32 million deaths from TB in HIV-negative and 0.45 million deaths in HIV-positive persons . Asia and Africa alone constitute 86% of all cases . Bangladesh ranked the 6th highest for the burden of TB among 22 high-burden countries in 2007, with 353,000 new cases, 70,000 deaths, and an incidence of 223/100,000 people per year .

Implementation of directly-observed therapy short course (DOTS) has been a 'breakthrough' in the control of tuberculosis. In many countries, it has become the cornerstone in the treatment of tuberculosis. The number of countries and the coverage of DOTS within the countries have increased over the years .Over the last 15 years, about 35 million people have been cured, and eight million deaths have been averted with the adoption of DOTS . Implementation of DOTS was started in 1993 in Bangladesh, and it gradually covered the whole country.

Men are more commonly affected than women. The case notifications in most countries are higher in males than in females. There were 1.4 million smear-positive TB cases in men and 775,000 in women in 2004. The ratio of female to male TB cases notified globally is 0.47:0.67.The reasons for these gender differences are not clear. These may be due to differences in the prevalence of infection, rate of progression from infection to disease, under-reporting of female cases, or the differences in access to services.The association between poverty and TB is well-recognized, and the highest rates of TB were found in the poorest section of the community. TB occurs more frequently among low-income

Evidence of TB has been found in the bones of prehistoric man in Germany, dating back to 2000 B.C. Also typical TB changes have been found in spines of skeleton of ancient Egyptian. (2500 to 1000 B.C) Hippocrates also devoted some attention to this. Aristotle conceived the theory that TB is an infectious diseases. Villerriun in 1865 showed in a series of classical experiments that TB is caused by a specific agent that can be transmitted from man to animals by inoculation of infected material. Robert koch applied himself and in 1882 the elusive microbe was identified. The discoveries of stethoscope by Laennec in 1819, and the works of Rudolph virchow the founder of the Cellular pathology, X ray, by Roentgen in 1895, allergy coined by Von Priquet in 1907 and BCG by Calmette and Guerin (from 1908 to 1921) evolutioned the study of TB in Humans.

Worldwide each year there are 8 million new cases of Tuberculosis with 3 million deaths. This death comprise 25% of all available deaths in developing countries. 95% of TB cases and 98% of Tuberculosis deaths occur in developing countries. Three fourth of the TB cases in developing countries occur among the economically productive age group.(i.e) 15 to 50 years of age. Rate of TB infection are highest where people are poor and over crowded. Much of the TB burden is in South East Asia. According to WHO 39% of all notified cases globally are contributed by countries of South East Asia followed by Western Pacific (25%), Africa (15%), Mycobacterium Tuberculosis infects one third of the worlds population (i.e) about 1.9 billion people. Eastern Mediterranean (4%), Americas (7%), and European Regions (10%). In South East Asia 95% of TB cases are reported from India, Indonesia, Myanmar, Thailand while in western Pacific great majority are from China, Philippines, Vietnam, Cambodia

1.2 STATEMENT OF THE PROBLEM

A study to assess the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarar Hospital of Thoracic Medicine at Chennai.

1.3 OBJECTIVES OF THE STUDY

- To assess the pretest level of knowledge multimodal nursing intervention on Tuberculosis management among clients with Tuberculosis in experimental/control group.
- To assess the evaluate the impact of multimodal nursing intervention on Tuberculosis management among clients with Tuberculosis in experimental group in control group.
- To compare the pretest and post test level of impact of multimodal nursing intervention on Tuberculosis management among clients with Tuberculosis.
- To find out the association between the post test level of knowledge on impact of multimodal nursing intervention on Tuberculosis management among clients with Tuberculosis and their selected demographic variables.

1.4 OPERATIONAL DEFINITIONS

Assess

Calculate or estimate the value,importance,or quality of someone or something. In this study it refers to find out the knowledge of Tuberculosis clients.

Impact

It is an effect of an multidimensional concept. It focuses on every precise understandings of explicit.An act of oneobject hitting another.press firmly into something.

Multimodal

it is the dual – mode operation, communicating through combinations of two or more modes.modes include written language,spoken language,and patterns of meaning that are visual,avdio,gestural,tactile and spatial. The term applied to the management of client with tuberculosis

Nursing

It facilitates the identification of the nursing support for the actual treatments and actions that are performed to help the patient to reach the goals that are set for them.

Intervention

The action of coming between people or things to improve or control a situation.

Tuberculosis

An infectious disease transmitted by a bacterium,in which tubercles appear in the tissues,especially the lungs.person develops active TB diseases caused by mycobacterium tuberculosis bacteria. The symptoms such as cough, fever, night sweats, weight loss may be mild for many months.

Management

The action of managing**.**Management is the administration of the treatment practices to create the highest level of efficiency possible within an treatment process.

1.5 HYPOTHESIS

H1: There will be significant difference between pre test and post test level of Tuberculosis management program among TB clients.

H2: There will be a significant association between and their selected Quasi-experimental Non-Randamized control group demographic variables and post test level of Tuberculosis management program among Tuberculosis clients.

1.6 ASSUMPTIONS

- The TB clients may have inadequate knowledge regarding the effect of the TB management program.
- Providing community based intervention will enhance the management of TB.

1.7 DELIMITATIONS

The study is limited to tuberculosis clients in Government Thiruvatteeswarar hospital Chennai.

The study was limited to Data collection only for 4 weeks

The study was limited to Data collection is limited to clients who know Tamil and English.

1.8 CONCEPTUAL FRAMEWORK

A conceptual framework is a process of ideas, which are framed and utilized for the development of a research design. It helps the researcher to know what idea needs to be collected and gives direction to entire research process.

Nola J Pender described the Health Promotion model.

HEALTH

According to this model health is defined as a positive dynamic state rather than simply the absence of disease. The persons level of wellbeing is described at the highest level in this model

PERSON

The health promotion model describes Person as multidimensional as they interact within their environment to pursue health.

ENVIRONMENT

The health promotion model describes the areas where the person is in contact as an environment.

FOCUS AREAS OF PENDER'S MODEL

Pender's model focuses on three areas:

Individual characteristics and experiences,

Behavior-specific cognitions and affect, and

Behavioural outcomes.

Individual Characteristics and Experiences

The model states that each person has unique personal characteristics and experiences that affect subsequent actions. It also describes that the set of variables for behavior specific knowledge have important motivational significance. In this study individual characteristic includes the demographic variables such as age, education, occupation, income, religion, type of family, area of living and marriage in their family,

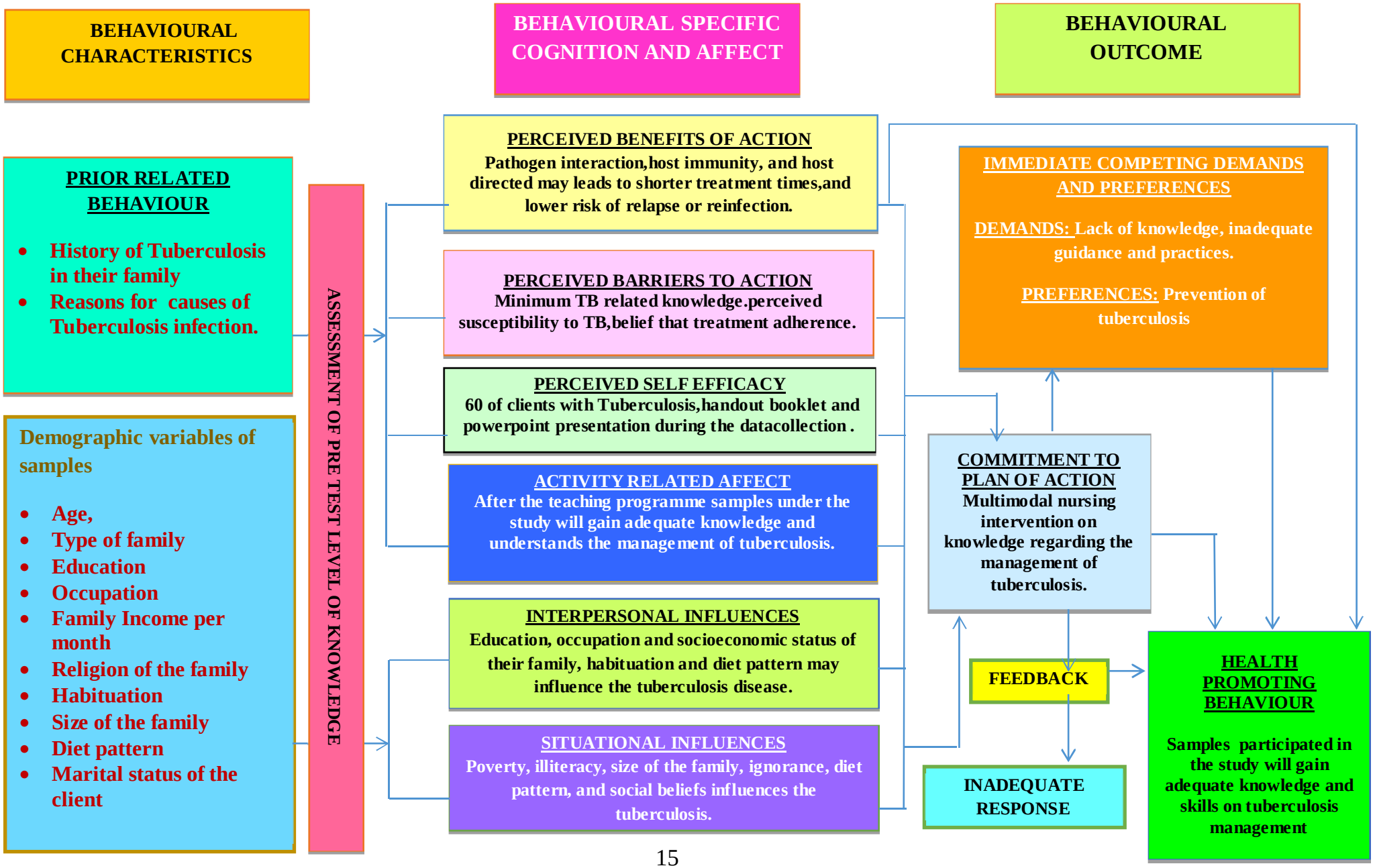
Behavour Specific Cognitions and affect

The model describes the behavioural specific cognitions includes the various activities that increases or inhibits the cognitions and understandings that brings the modifications in the healthy outcome. In this study the activities includes the Multimodal nursing intervention on tuberculosis management among clients with tuberculosis with the help of booklets, pamphlets and power point presentation. Pre test and post test will be conducted prior and after the multimodal nursing intervention to assess the level of understandings and gain in knowledge.

Behavioural Outcomes

Behavioural outcome is the end point in the Health Promotion Model. Behaviour specific cognitions will bring adequate gain in the knowledge which results in improved health, enhanced functional ability and better quality of life at all stages of development. Behavioural outcome in this study is expected to have a adequate knowledge on tuberculosis management among clients with tuberculosis.The behaviour outcome may also be moderate or inadequate which may require reinforcement again by education.

FIG. 1.2. CONCEPTUAL FRAMEWORK BASED ON MODIFIED PENDERS HEALTH PROMOTION MODEL



CHAPTER –II
REVIEW OF LITERATURE

This chapter deals with review of literature related to tuberculosis management among clients with tuberculosis.

2.1 REVIEW OF LITERATURE RELATED TO STUDY

Review of literature is a written summary of the study conducted previously study topic .The review of literature is defined as a broad, comprehensive in depth, systematic and critical review of scholarly publication, unpublished scholarly print materials, audiovisual materials and personal communication.

In This Study, Review Of Literature Were Classified

- Studies related to prevalence of tuberculosis.
- Studies related to factors influencing tuberculosis.
- Studies related to consequences of tuberculosis.
- Studies related to awareness of tuberculosis.
- Studies releted to prevention of tuberculosis.

STUDIES RELATED TO PREVALENCE OF TUBERCULOSIS

Manithcheu, (2019) conduct a cross-sectional study from Tuberculosis Management in tuberculosis clients. Data was based on multistage cluster sampling and stratified by urban, rural and remote areas.To be able to meet the study objectives, we needed to detect a statistically significant reduction of 42% or more, with a relative precision of 25%, in the prevalence of smear-positive tuberculosis among adults (i.e. people 15 years of age or older) between surveys, we calculated that a sample of approximately 38 400 adults was needed. This was based on a 5% margin of error for an observed prevalence of

256 per 100 000, a design effect of 1.43 and an assumed participation rate of 90%. The target cluster size was set to 640. Thus, the number of clusters was calculated to be 60 for urban and rural clusters. Concluded tuberculosis management infection and disease remain common in populations and less multiple healthcomplaints.

Mohamad Husssain, (2019) conducted epidemiological study in tuberculosis clients atHaramaya district. 140 out of the 280 patients who were diagnosed as TB underwent blood tests for fasting blood glucose and HbA1C along with the routine investigstions like CBP,ESR,ChestX-ray,ECG,Sputum examination.The data of patients with TB compared The group was compared. The data of sputum positive and sputum negative groups was compared.Student's t-test was performed for normally distributed continuous variables and a Pvalue was derived.

MichalKudlacek, et al (2019) A community based cross-sectional study design was conducted from the clients of tuberculosis.Data on demographic characteristics,knowledge,attitude,and practice towards the tuberculosis were collected using semi-structured questionnaires. Concluded tuberculosis infection during study were treated individually with standard dose of prevalence as per WHO Guidelines.

MW Borgdorff, et al (2018) conductedtuberculin surveys and surveys on prevalence of smear-positive TB since 1975 were identified through a literature search. For these surveys, the ratio between the number of tuberculous infections (based on ARTI estimates) and the number of smear-positive TB cases was calculated and compared to the ratio of 8 to 12 tuberculous infections per prevalent smear-positive TB case as part of the Styblo rule.concluded less healthynlifestyle and practice and less multiple health compliants.

S.K.Sharma, (2018) was conducted in this cross-sectional,descriptive study, residents of Faridabad district were assessed

for the prevalence of tuberculosis. Twelve rural and 24 urban clusters with estimated populations of 41,106 and 64,827 individuals were selected for the study. Two sputum samples were collected from individuals found eligible for inclusion. The samples were also cultured by modified Petroff's method and were examined for growth of Mycobacterium tuberculosis once a week for eight weeks. A person found positive by smear and/or culture was identified as sputum-positive pulmonary TB positive.concluded TB cases weresubjected to mycobacterial culture and drug-susceptibilitytesting(DST).

Peter onyango, (2018) was conduct a cohort study of 5004 adolescents aged 12–18 years was conducted. Adolescents were screened for prevalent TB using clinical criteria, history of TB contact, and a Mantoux test. Cases of suspected TB were investigated through two sputum examinations (microscopy and liquid culture and chest radiography.

Abdulkareem FN, Merza MA, Salih. (2018) We modeled reported TB cases between2015 and 2018 using wavelet analysis and applied maximum covariance analysis(MCA) to determine regional and seasonal patterns and the risk of TB exposure.conclusion the study highlights that TB cases is clustered in space and time and that even at small spatial scale,differences in prevalence can be substantial**.**

NK,Streicher EM,et al. (2018) A secondary data analysis of india demographic and health survey was carried out.Questions about self-reported tuberculosis, transmission and curability of tuberculosis were analyzed.concluded knowledge about transmission is very poor and misconceptions all exist.

***Dean AS, Zignol M, Cabibbe AM, et al* (2017)** was conducted a systematic review in 274 asymptomatic ART-native HIV-1-infected persons in Khayelitsha Day Hospital,cape Town,South Africa.All

participants were screened for TB using a symptom screen and spoligotyping was performed to determine genotypes.The conclusion suggest that,in high HIV/TB endemic settings,a positive HIV-1 test should prompt TB screening by sputum culture irrespective of symptoms,particularly in those with a positive tuberculin skintest,longer history of HIV infection and low CD4 count.

STUDIES RELATED TO FACTORS INFLUENCING TUBERCULOSIS

Geetha Ramachandran , (2020) was conducted Asystematic review and meta-Analysis .The study was undertaken in adult patients with pulmonary/extrapulmonary TB receiving ATT in RNTCP treatment centers of the Chennai Corporation from October 2013 to September 2015. Patients were recruited from eight TB units across the city of Chennai. Diagnosis and treatment were according to RNTCP guidelines (36). Patients were treated with either the category I treatment (RMP, INH, PZA, and EMB for 2 months, followed by RMP and INH for 4 months) or the category II treatment (streptomycin, INH, RMP, PZA, and EMB for 2 months, followed by INH, RMP, PZA, and EMB for 1 month and INH, RMP, and EMB for the remaining 5 months) . concluded the study the impact of low serum concentrations on treatment outcomes is less well studied.

Erigena Rutayisire, (2019) was conducded the study a cross sectional descriptive research design using quantitative approach. A cross-sectional study design was chosen because; the present study compared a single point in time variables. Quantitative method was selected because these methods allowed researcher assess more variables at the same time.sconcluded the study a range of spatial analysis methodologies has been employed in divergent contexts,with all studies demonstrating significant heterogeneity in spatial TB diatribution.

Juan-Pablo Millet, (2019) the study was conducted cross-sectional descriptive study, 1.5 million deaths. TB has been classically associated with poverty,overcrowding and malnutrition.there were 8.8 million new cases of TB a, which is located to the north of Lima, Peru. Ventanilla is made up of a series of shantytowns and covers a 70 000 km2 area. It has a population of approximately 500,000 people distributed between 16 zones, each of which has a health establishment (15 health posts and one hospital) where the Ministry of Health operates the National Tuberculosis Control Program. Previous research in Ventanilla revealed an annual tuberculosis incidence rate of 242/100,000 in 2005 and an average daily income of 0.9 USD per person in tuberculosis affected families (unpublished data, CA Evans).

Frezgi Hidray Gebreweld, (2019) was conducted a Qualitative study which included in-depth interviews with 12 TB patients,three focus group discussions in selected health facilities in which one group comprised eight patients and key informant interviews with three health workers.the concluded the study lack of the knowledge,loss of income,stigma,and lack of social support,drug sideeffects,and long treatment duration emerged as important barriers for treatment adherence.

Yufeng Wen, et al (2018) was conduct a cross-sectionalstudy,A nine year these study was conducted using data trom Anqing centre for Diseases prevention and control.Concl ded the study Tuberculosis treatment in Anqing area was successful and independent of treatment regimens.

Ninfa Marlen Chaveset,et al (2018) was conducted A systematic review with meta-analysis that reported the results of the treatment of TB and the factors influenced these results.The quality of the studies was evaluated according to the Newcastle-Ottawa quality assessment

scale.concluded the studyfactors such as age,sex,alcohol consumption,smoking,lack of sputum conversion at two months of treatment and HIV affected the success of TB treatment

Dami A Onifade, et al (2018) was conducted the study investigated attitudes and experiences relating gender to tuberculosis using the grounded theory approach to describe beliefs amongst key tuberculosis control stakeholders.The conclusion of the study this reflected societal gender values and occurred despite apparent gender equality in care provision.

STUDIES RELATED TO CONSEQUENCE OF TUBERCULOSIS

Anne Lia Cremers, (2018) was conducted a mixed method study at Kanyama clinic and surrounding areas, in Lusaka, Zambia; structured interviews with 300 TB patients, multiple in-depth interviews with 30 TB patients and 10 biomedical health workers, 3 focus group discussions with TB patients and treatment supporters, complemented by participant observation and policy analysis of the TB control program. Predictors of stigma were identified by use of multivariate regression analyses; qualitative analysis of the in-depth interviews, focus group discussions and participant observation was used for triangulation of the study findings.The conclusion of the study findings illustrate that many TB patients faced stigma-related issues, often hindering effective TB control and suggesting that current efforts to reduce stigma are not yet optimal. The content and implementation of sensitization programs should be improved and more emphasis needs to be placed on women and children.

Roya Alavi-Naini, (2018) was conducted this prospective case-control study conducted at a University-Affiliated Hospital (Boo-Ali Hospital, Zahedan, and Southeastern Iran) from March 2007 to March

2012 enrolled 253 TB patients and 312 healthy controls. Factors including history of cigarette smoking, duration of smoking, number of cigarettes smoked per day, consumption of other drugs (parenteral and non-parenteral), and family history of tuberculosis and smoking, were evaluated in both cases and controls. Univarate and multivariate logistic regressions were performed to compare TB cases and controls. The odds ratio (OR) and 95% confidence intervals were also estimated. Theconcluded present study evidenced the association between TB and smoking. It is therefore recommended to include interventions for smoking cessation in the current TB control practice.

Nabil Tachfouti, (2018) was conduct a Case-control study of 290 TB patients (85 defaulters and 205 controls). A defaulter was defined as a TB patient who interrupted treatment for two months or longer. Socio-demographic measurements, knowledge and attitude were collected by face to face anonymous questionnaire. Khi-square test was conducted to examine differences in TB attitudes and knowledge according to treatment adherence.This studysuggest a poor knowledge on TB especially among non adherent patients. This finding justifies the need to incorporate patient's education into current TB case management.

Kevin D, (2017) was conducted a study meta-analyses of study-level observational data were undertaken and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRIMSA) guidelines . Electronic searches were carried out for relevant studies in the PubMed database, as well as in a comprehensive tuberculosis studies database housed at the Global TB Programme of the WHO. The search strategies for these databases were identical to those operationalised in the prior meta-analysis by Lönnroth et al. As the prior meta-analysis by Lönnroth et al included studies published up to 2007, the present search identified studies published between January 2007 and June 2016. In addition to the above-mentioned database searches,

the reference lists of all included studies were reviewed and expert consultations (with K. Lönnroth and J. Rehm) were held to further identify relevant studies. No language restrictions were applied and grey literature was included, but authors were not contacted.

S.K Singh, (2018) was conducted a study utilizes data from the fourth round of National Family Health Survey (NFHS-4), 2015-16, which was collected from self-reported information pertaining to Tuberculosis in the household questionnaire. The specific question was, "Does any usual resident of your household suffer from tuberculosis?" the response to which helped in the detection of Tuberculosis. Binary Logistic regression was performed from which appropriate inferences are drawn on the association of household environment with Tuberculosis.This study involved a cross-sectional approach with a mixed method of both quantitative and qualitative data collection instruments. The quantitative aspect involved a household survey.

Fan LH, Phu PT, Vinh DN, et al (2017) was conduct a meta-analysis of risk factors for poor treatment outcomes of 2266 multidrug-resistant tuberculosis cases in Ho Chi Minh City: a retrospective study. BMC Infect Dis 2020 Feb 22;20:16Vekemans J, Brennan MJ, Hatherill M, et al. Preferred product characteristics for therapeutic vaccines to improve tuberculosis treatment outcomes: key considerations from World Health Organization consultations. Vaccine 2019 (published online Nov 13) Epidemiological characteristics of pulmonary tuberculosis among health-care workers in Henan, concluded the study multi drug resistant increasing the tuberculosis competences.

Jinta Yunibhand, (2017) was conducted Eight hospitals were randomly selected from seventeen hospitals by the lottery method without replacement.A random sampling method was obtain the

consequence.concluded the study indicate that most factors had both direct and indirect effects on the age,social support,selfcare strategies.

STUDIES RELATED TO AWARENESS OF TUBERCULOSIS

Kusimo, (2017) was conducted a study involved a cross-sectional approach with a mixed method of both quantitative and qualitative data collection instruments. The sample size for the household survey was calculated using the Windows Program for Epidemiologists (WINPEPI) [7]. The applied formula was based on simple proportion with a cluster sampling technique with three key indicators: national prevalence of TB of 537/100,000 population, the mean knowledge score of TB from the baseline estimated at 62.4%, and the proportion in the baseline with correct knowledge of TB estimated at 19%. A confidence level of 95%, a precision of 0.05, and a design effect of 2 were introduced. Based on these three indicators and parameters, the minimum adequate sample size required was 472 (based on correct knowledge).

Sneha mittal, (2019) was conducted tuberculosis (TB) is a major health problem in India. The Revised National TB Control Programme (RNTCP) is working towards elimination of TB in the country by 2025. As the RNTCP relies on passive case finding, it is crucial for the success of the RNTCP that TB patients have knowledge about their disease. The present study aimed to assess the knowledge of TB among pulmonary TB (PTB) patients.A cross-sectional questionnaire based study using a pretested semi-structured questionnaire among new and previously treated PTB patients at Haldwani Block of Nainital District of Uttarakhand State of North India. Data was analyzed using the software Epi Info version 7.2.0.1.

Ravi P, (2017) was conducted a study Tuberculosis (TB) is a major health problem in India. The Revised National TB Control Programme (RNTCP) is working towards elimination of TB in the

country by 2025. As the RNTCP relies on passive case finding, it is crucial for the success of the RNTCP that TB patients have knowledge about their disease. The present study aimed to assess the knowledge of TB among pulmonary TB (PTB) patients.A cross-sectional questionnaire based study using a pretested semi-structured questionnaire among new and previously treated PTB patients at Haldwani Block of Nainital District of Uttarakhand State of North India.

Chethan kumar, (2018) was conducted a study the present work was a community-based study conducted instudents from randomly selected high schools and PUC) inBangalore Rural and Urban region, who were interested in andgave consent to participate in the study. The total number of2635 students from high schools (eight, ninth and tenthstandard) and PUCs (first year PUC), aged between 11 and 18years participated in the study. The purpose of the study wasexplained to the teachers and students and was assured of theconfidentiality of all replies. The complete project was doneaccording to Declaration of Helsinki and approved by theInstitutional Ethics methodololgy .

Renuka Manjunath, (2019) was conducted a study sample size was obtained to be 120 taking 77% of students knew TB is caused by bacteria from Vellore study [1]. Study period-August-September 2010.129 students studying in 9th and 10th standard of two high Schools in Mysore city was selected by cluster sampling. After informed consent was obtained from the head of the institution, only children who said that they heard about TB The study cohort was assembled during two randomized field experiments conducted in partnership with the Jameel Poverty Action Lab (J-PAL) and Operation ASHA [13,14]. Operation ASHA is an Indian NGO that supports TB patients through DOTS (Directly Observed Treatment, Short course), the standard TB treatment regimen, under public-private partnerships with State Governments in India. Patients were assigned to a DOTS center

where they would receive their medicine from a DOTS provider and receive counseling from a health worker who shared information on tuberculosis diagnosis and treatment, in addition to monitoring and following-up on treatment adherence. For the purpose of the study, patients were interviewed at the beginning (entry) and end of DOTS (exit) by an independent research organization, using an in-depth survey with extensive questions regarding TB knowledge and related health behaviors. were given a self committee of V.I.P.S., Bangalore.

STUDIES RELATED TO PREVENTION OF TUBERCULOSIS

Siddhartha baral, (2018) was conducted a study cohort was assembled during two randomized field experiments conducted in partnership with the Jameel Poverty Action Lab (J-PAL) and Operation ASHA, Operation ASHA is an Indian NGO that supports TB patients through DOTS (Directly Observed Treatment, Short course), the standard TB treatment regimen, under public-private partnerships with State Governments in India. Patients were assigned to a DOTS center where they would receive their medicine from a DOTS provider and receive counseling from a health worker who shared information on tuberculosis diagnosis and treatment, in addition to monitoring and following-up on treatment adherence. For the purpose of the study, patients were interviewed at the beginning (entry) and end of DOTS (exit) by an independent research organization, using an in-depth survey with extensive questions regarding TB knowledge and related health behaviors.

Paul garner, (2019) was conducted this study involved a cross-sectional approach with a mixed method of both quantitative and qualitative data collection instruments. The quantitative aspect involved a household survey.Youths, adult women, and men of reproductive age group in the communities where TB interventions have been implemented constituted the study population for the quantitative

component. The sample size for the household survey was calculated using the Windows Program for Epidemiologists (WINPEPI) . The applied formula was based on simple proportion with a cluster sampling technique with three key indicators: national prevalence of TB of 537/100,000 population, the mean knowledge score of TB from the baseline estimated at 62.4%, and the proportion in the baseline with correct knowledge of TB estimated at 19%. A confidence level of 95%, a precision of 0.05, and a design effect of 2 were introduced. Based on these three indicators and parameters, the minimum adequate sample size required was 472 (based on correct knowledge).

Sophie Huddart, (2018) A matched patient-health worker dataset (n = 6,031) of publicly treated TB patients with NGO-provided treatment support health workers was compiled in nine Indian cities from March 2013 to September 2014. At the beginning and end of TB treatment, patients were asked about Social proximity between health worker and patients predicted greater knowledge and adherence to infection prevention behaviors but the latter rate remains undesirably low.their knowledge of TB symptoms, transmission, and treatment.

Mariana Matasik, (2018) was conducted a case-control study including new TB patients registered at eight PHCs from 2007 to 2009. Non-adherent cases were TB patients with a history of not taking anti-TB drugs for >2 consecutive weeks or >30 days cumulatively. Controls were randomly selected from patients who completed all doses of TB drugs in time. Data were collected by face-to-face interview using a pre-structured questionnaire and analyzed . Our results suggest the need to improve TB treatment delivery especially to those who have difficult access to healthcare, and to routinely provide education to increase patients' knowledge about TB and TB treatment. In addition, more attention to younger patients and those with a history of TB in their

family is also needed.ith logistic regression models.infection prevention behaviors.

Ahmad R, Xie L, Pyle M, et al.(2018) A rapid test for active pulmonary tuberculosis in adult patients with persistent cough.Vitamin D status and risk of incident tuberculosis disease: a nested case-control study, systematic review, and individual-participant data meta-analysis..

Alemu A, Bitew AW, Worku T. Poor treatment outcome and its predictors among drug-resistant tuberculosis patients in Ethiopia: a systematic review and meta-analysis. Tuberculosis outbreaks among students in mainland China: a systematic review and meta-analysis. Cardiovascular morbidity and mortality among persons diagnosed with tuberculosis: a systematic review and meta-analysis. PLoS One 2020 (published online Jul 10

Sinjita Dutta et al (2017) was conduct study was observational, descriptive, and epidemiological. Study design was cross-sectional. Study setting was general out-patient department of tertiary care hospitals of West Bengal. Sample size was 464 (Four hundred sixty four) patients. The collected data were tabulated, analyzed, and interpreted by proper statistical methods (by percentage and Z test).Concluded an attempt could be made in future to improve awareness among illiterates to remove myths and misconceptions, to allay the social stigma attached with it, to decrease TB transmission.

Thumamo Pokam, (2020) was conduct the hospital-based, cross sectional study was carried out from June to July 2017 in 4 TB treatment centers located in Fako Division, one of the divisions in the South West Region of Cameroon with its capital at Limbe. The study included two regional (Buea and Limbe) and two district (Tiko and Muyuka) hospitals. The study population included TB patients, both men and women receiving free treatment at the hospital's DOTS centers. Only

patients in the continuation phase of therapy and were 18 years old and above were included in the study. Patients still at the intensive phase of treatment were excluded considering their isolation and infectiousness.

CHAPTER-III
RESEARCH METHODOLOGY

Research methodology is one of the vital section of a research. Since the success of any research is mostly dependent upon the methodological issues that are followed in the execution of the research work. The role of methodology consists of procedure and technique for conducting the study.

Crotty (1998) defined research methodology as the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes.

This chapter explains the methodology in detail. It includes research design, setting of the study, sampling technique, tools, pilot study, data collection process and plan for the data analysis. The study was conducted to assess the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine in Chennai.

3.1. RESEARCH APPROACH

Cress well (2007) illustrating the research research approach as an effective strategy to increase the validity of social research.

Quantitative research approach was adopted to accomplish the main objective of assessing the Impact of multimodal nursing intervention on tuberculosis management among clients with Tuberculosis attending Government Thiruvatteeswarer Hospital of Thoracic Medicine at Chennai.

3.2. RESEARCH DESIGN

Donald R. Cooper had defined research design as the blue print for collection, measurement and analysis of data. It aids the scientist in allocation of his limited resources by posing crucial choices.

The research design selected in this study is Pre Experimental one group pretest and post test design.

Diagramatic Representation Of The Research Design

Group	Pre test	Intervention	Post test
Clients with tuberculosis	01	X	02

O1 : Assessment of pretest knowledge of group of study participants prior to multimodal nursing intervention.

X: Administration of multimodal nursing intervention on tuberculosis management among clients with tuberculosis.

O2: Evaluate the Post test knowledge of same group of study participants after one week of the multimodal nursing intervention.

3.3. SETTING OF THE STUDY

The study was conducted in Govt.Thiruvatteewarer hospital of thoracic medicine at Chennai.

3.4. DURATION OF THE STUDY

The duration of data collection was four weeks from 20.01.2020 to 15.02.2020.

3.5. STUDY POPULATION

3.5.1 Target population

The target population of the present study includes clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine at Chennai.

3.5.2 Accessible population

The accessible population of the studyincludes clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine at Chennai .

3.6 SAMPLE SIZE

The sample size includes 60 includes clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine at Chennai.

3.6 CRITERIA FOR SAMPLE SELECTION

3.6.1 Inclusion Criteria

- Tuberculosis clients who are staying Govt.Thiruvatteeswarer hospital of thoracic medicine.
- Tuberculosis clients those who are willing to participate.
- Tuberculosis clients those who are able to understand Tamil and English.

3.6.1 Exclusion criteria

- The absentees at the time of data collection.
- The other diseases.E.g-Diabetes mellitus,Hypertension and Cardiac diseases.

3.8 SAMPLING TECHNIQUE

In this study Non Probability Purposive Sampling Technique was used to select the subjects.

3.9 RESEARCH VARIABLES

3.9.1Independent Variable

It refers to multimodal nursing intervention on Knowledge regarding tuberculosis management among clients with tuberculosis.

3.9.2 Dependent Variable

It refers to knowledge regarding tuberculosis management among clients with tuberculosis.

3.9.3 Demographic Variables

It includes age, education, occupation and income of the parents, type of family, number of siblings in the family, and area of living.

3.10 DEVELOPMENT AND DESCRIPTION OF THE TOOL

Data collection tools are the procedures or instruments used by the researcher to observe the key variables in the researchproblem

3.10.1 Development of the tool

Appropriate semi-structured questionnaire has been developed after extensive review of literature and obtained expert opinion, content validity from medical, nursing and statistical experts. Construction of the tool, pre testing of the tool, reliability of the tool was ascertained by test-retest method.

3.10.2 Description of the tool

The tool for data collection consists of 2 sections

Section - I

It contain demographic variables which comprises of the items such as age, type of family, Education, occupation and income of parents, number of siblings in the family and area of living.

Section - II

This comprised of a Self administered structured knowledge questionnaire regarding the tuberculosis management among clients with tuberculosis.The questionaire contains 20 multiple choice questions. The concept for developing the tool which includes 6 questions related to general information or knowledge, 3 questions related to causes, 4 questions related to tuberculosis management among clients with tuberculosis,4 questions related to clinical manifestation of tuberculosis,and 3 questions related to prevention of tuberculosis.

Multimodal nursing intervention

Multimodal nursing intervention regarding the tuberculosis,prevalence of tuberculosis, factors influencing tuberculosis, consequence of tuberculosis, awareness of tuberculosis and prevention of tuberculosis.

Score Interpretation Of The Semi-Structured Questionnaire

S. No	Question No	Items	No.of. Questions
1	I (1–14)	General information on Knowledge regarding tuberculosis management	14
2	II. (15-19)	Causes of tuberculosis management	05
3	III. (20-21)	Clinical manifestation of tuberculosis management	02
4	IV. (25-28)	Prevention on tuberculosis management	04
5	V. (29-32)	Awareness of tuberculosis management	03

Scoring Key

Total number of items: 20

Total Score: 100

The score given as follows

For correct answer - 1 score

For wrong answer - 0 score

The score ranges from

0 - 50% : Inadequate

51 - 75% : Moderate

76 - 100% : Adequate

SCORE INTERPRETATION

A semi-structured questionnaire was used to assess the knowledge regarding tuberculosis management among clients with tuberculosis. It contains 20 multiple choice questions. Each correct answer was given a score of (1) one and wrong answer was scored as (0) zero. The total score was 20.

The score were interpreted as follows:

Level Of Knowledge And Score

Level of knowledge	Score	Percentage
Inadequate	0 - 5	<50%
Moderate	6 - 10	51 - 75%
Adequate	11 - 20	>76%

3.12 CONTENT VALIDITY

After construction of questionnaire for "A study to assess the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarar Hospital of Thoracic Medicine at Chennai",it was tested for its validity and reliability.

Validity of the tool was assessed using content validity . Content validity was determined by experts from Nursing and Medical. They suggested certain modifications in tool. After the modifications they agreed this tool for assessingeffectiveness of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarar Hospital of Thoracic Medicine in Chennai.

Reliability of the tool was assessed by using Test-retest method. knowledge score reliability correlation coefficient value was0.83. This correlation coefficient was very high and it is good tool for assessingeffectiveness of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarar Hospital of Thoracic Medicine in Chennai.

3.13 ETHICAL CONSIDERATION

The study was proposed and submitted to the ethical committee, Madras Medical College and the committee approved the study. All respondents were carefully informed about the purpose of the study and their part during the study. Informed consent for the study was obtained from all participants. Confidentiality of the subject's information was maintained. Thus the investigator followed the ethical guidelines, which were issued by the research committee. Necessary permission to conduct

the study was requested and obtained from Hospital superinntendent, Chennai. The study was done without any violation of human rights.

Human rights

- The study was proposed among the experts of the Institutional Ethics Committee and got the permission to carry out the study.
- The study details was also explained to the Hospital Superintendent, to carry out the study in the out patient ward in Governnment Thiruvatteeswarer hospital of thoracic medicine at Chennai.
- The content validity was received from the various experts in the community health nursing.

Beneficence

- Potential benefits and risks were explained to the samples.

Dignity

- Participants were informed about the study in detail and ensured their participation.
- Informed consent was obtained from the participants.
- Freedom was given to the participants in opting to participate in the study or withdrawal from the study.

Confidentiality

- Confidentiality and anomity pledge was ensured. The study participants were also ensured for maintaining the confidentiality of their details.

Justice

- The study participants were treated with justice.

- ❖ The content of the multimodal nursing intervention was also taught to the participants of the control group through the booklets after the post test.

3.14 RELIABILITY OF THE TOOL

Reliability of the tool was assessed by using Test-retest method. knowledge score reliability correlation coefficient value was 0.83. This correlation coefficient was very high and it is good tool for assessing effectiveness of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarar Hospital of Thoracic Medicine in Chennai.

3.15 PILOT STUDY

The pilot study was conducted for the period of 7days in chembiyam primary health centre, Chennai. Formal permission was obtained from the authority. Purposive sampling technique was used to select the study subjects, Individual consent obtained from the each subjects after explaining the purpose of the study. The total sample size was 6 tuberculosis clients. The health status of the sample was assessed by demographic variables. The pre test knowledge assessment was done to the sample using structured knowledge questionnaire. After that multimodal nursing intervention on tuberculosis management among clients with tuberculosis.The post test knowledge was assessed.

Data analysis was done using descriptive and inferential statistics. The knowledge regarding tuberculosis management among clients with tuberculosis 63.3% of the samples have inadequate knowledge and 36.7% samples were having moderate knowledge. The mean score percentage was 39.65 which revealed inadequate knowledge for the samples regarding Tuberculosis management among clients with tuberculosis. .

The association between the level of knowledge regarding tuberculosis management among clients with tuberculosis samples and their selected variable was checked. Result showed that there was association between the level of knowledge and their demographic variables. No modifications was made after the pilot study.

3.16 DATA COLLECTION PROCEDURE

The plan of data collection for the proposed study is as follows:

- The study was conducted in Government Thiruvatteeswarer hospital of thoracic medicine at Chennai.
- Permission has obtained from the Institutional Ethics Committee, Formal permission was obtained from the Hospital Superintentdent, Chennai.
- Samples were drawn using Purposive sampling technique, during the 1st visit, the researcher introduced herself and explained the purpose of the study and confirmed the willingness of the tuberculosis clients to participate in the study by getting consent from them as per the inclusion criteria
- Data collection procedure was done for a period of four weeks. Pre assessment was done using semi-structured questionnaire: Subsequently multimodal nursing intervention was given on same day for 30 minutes.
- On the seventh day post assessment was conducted using same structured questionnaire.

Table 3.1 : Intervention Protocol for Experimental Control Group

S.No	Protocol	Experimental group	Control Group
1	Place	Government Thiruvatteeswarer Hospital of Thoracic Medicine at Chennai.	Government Thiruvatteeswarer Hospital of Thoracic Medicine at Chennai.
2	Intervention tool	Semi-Structured Questionnaire	Semi-Structured Questionnaire
3	Duration	10 to 15 minutes for pre-test 20 minutes for Multimodal Nursing Intervention.	10 to 15 minutes for pre-test 20 minutes for Multimodal Nursing Intervention.
4	Frequency	Morning / Evening	Morning / Evening
5	Time	20 minutes	20 minutes
6	Mode of teaching	MultimodalNursing Intervention using Handouts and Booklet.	
7	Administrator	Investigator	Investigator
8	Recipient	60 selected clients with Tuberculosis.	60 selected clients with Tuberculosis.

3.17 DATA ANALYSIS

Data entry: Entered the data into the excel sheet and coding the data into SPSS statistical package system

Analysis: Collected data will be analyzed by descriptive and inferential statistics.

STATISTICAL ANALYSIS

3.17.1 Descriptive analysis

- Frequency and percentage analysis will be used to describe demographic characteristics of clients with tuberculosis.

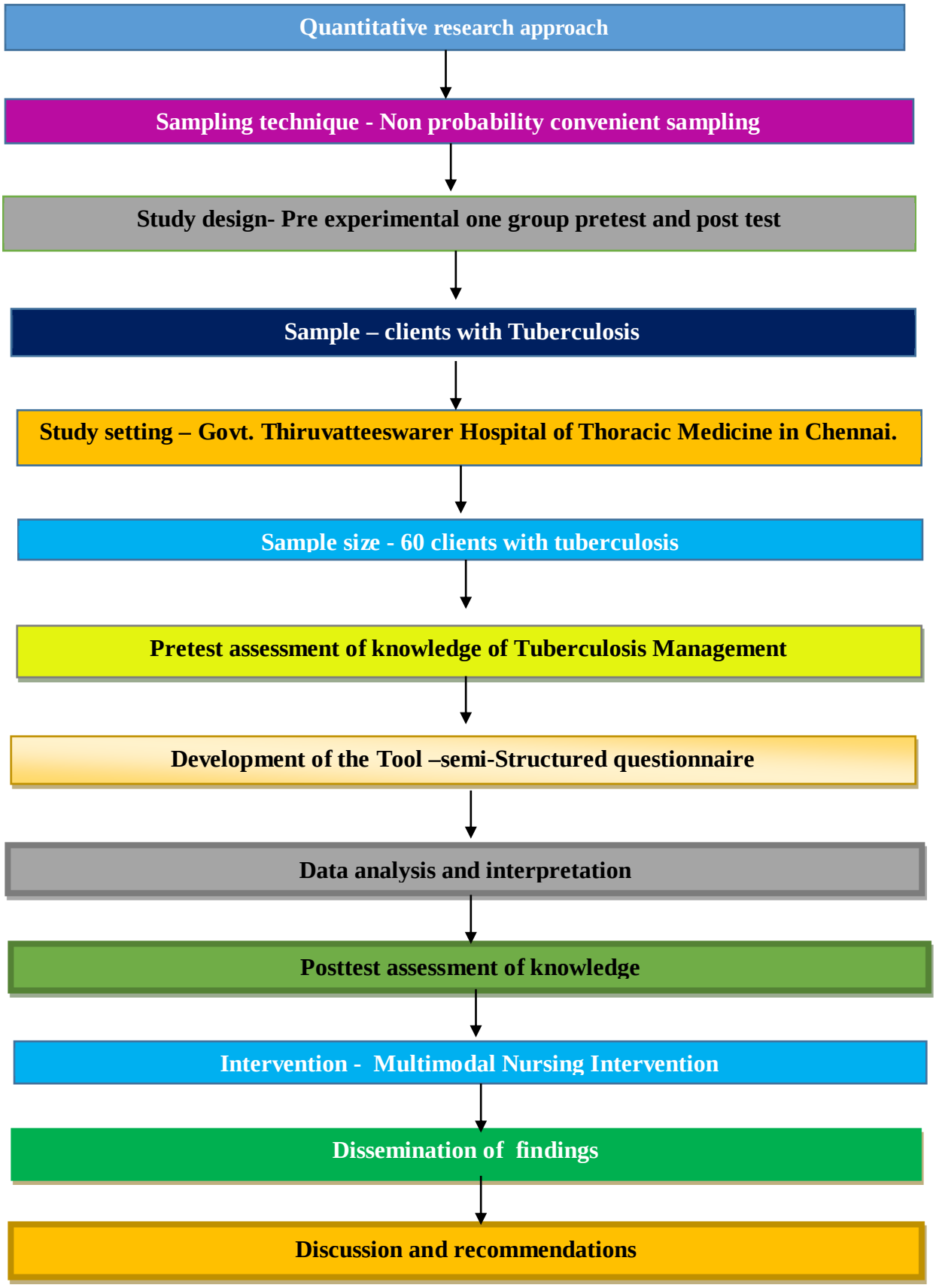
- Mean and standard deviation will be used to assess the knowledge of clients of tuberculosis.

3.17.2 Inferential analysis

- Client independent "t" test is used to determine the association betweendemographic variables with level of knowledge.
- Categorical variables difference between pre test and post test was calculated by using Mc Nemars test.
- Paired 't' test is used to determine the difference between pre-test and posttest level of knowledge.
- Association between post test knowledge score with demographic variables are analyzed by using chi square test.
- Association between knowledge gain score with demographic variables are analyzed by using one way analysis of variance and independent t – test.
- Effectiveness and generalization of study result was given in percentage with 95% CI and mean difference with 95% CI

Simple bar diagram, multiple bar diagram, scatter diagram with regression estimate were used to represent the data. A p value of ≤ 0.05 was considered statistically significant and two tailed tests were used for significance testing.

Fig. 3.1 SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



CHAPTER-IV
DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data obtained from the clients with tuberculosis age between 15- 40 years in Government Thiruvatteeswarer hospital of thoracic medicine at Chennai. The analysis and interpretation is derived under 6 sections as given below:

ORGANIZATION OF DATA:

The collected data were tabulated and presented according to the objectives under the following sections

Section-A : Description of demographic variables of study participants

Section-B : Description of Pre-test level of knowledge among clients with tuberculosis.

Section-C : Description of Post-test level of knowledge among clients with tuberculosis.

Section-D : Impact of multimodal nursing intervention and generalization of knowledge gain score.

Section-E : Compare the pretest and post test level of knowledge on Tuberculosis Management among clients with Tuberculosis.

Section-F : Association between the post test knowledge gain score and selected demographic variables.

SECTION A :DESCRIPTION OF DEMOGRAPHIC VARIABLES OF STUDY PARTICIPANTS

Table 1: Demographic Profile

Demographic variables		Group				Chi square test
		Experiment (n=30)		Control (n=30)		
		n	%	n	%	
Age	15 -20 years	2	6.67%	3	10.00%	$\chi 2$=0.46 p=0.93(NS)
	21 -25 years	6	20.00%	7	23.34%	
	26 -30 years	10	33.33%	10	33.33%	
	31 -35 years	12	40.00%	10	33.33%	
Education	Primary education	11	36.67%	14	46.67%	$\chi 2$=0.72 p=0.87(NS)
	Higher secondary	11	36.67%	10	33.33%	
	Under graduation	5	16.67%	4	13.33%	
	Post graduation	3	10.00%	2	6.67%	
Occupation	Cooly	11	36.67%	12	40.00%	$\chi 2$=0.10 p=0.99(NS)
	Self employment	10	33.33%	9	30.00%	
	Private job	6	20.00%	6	20.00%	
	Government job	3	10.00%	3	10.00%	
Monthly income	< Rs.5000	14	46.67%	13	43.33%	$\chi 2$=0.38 p=0.83(NS)
	Rs.5001 - 10000	10	33.33%	9	30.00%	
	Rs.10001 - 15000	6	20.00%	8	26.67%	

Demographic variables		Group				Chi square test
		Experiment (n=30)		Control (n=30)		
		n	%	n	%	
Type of family	Nuclear family	18	60.00%	17	56.67%	$\chi 2$=0.43 p=0.81(NS)
	Joint family	9	30.00%	11	36.66%	
	Extended family	3	10.00%	2	6.67%	
Religion	Hindu	22	73.33%	24	80.00%	$\chi 2$=0.40 p=0.82(NS)
	Muslim	3	10.00%	2	6.67%	
	Christian	5	16.67%	4	13.33%	
Habituation	Rural	9	30.00%	7	23.33%	$\chi 2$=0.35 p=0.84(NS)
	Urban	13	43.33%	14	46.67%	
	Semi urban	8	26.67%	9	30.00%	
Size of the family	2-3 members	9	30.00%	10	33.33%	$\chi 2$=0.42 p=0.81(NS)
	4-5 members	14	46.67%	15	50.00%	
	>5 members	7	23.33%	5	16.67%	
Diet	Vegetarian	6	20.00%	5	16.67%	$\chi 2$=0.11 p=0.74(NS)
	Non vegetarian	24	80.00%	25	83.33%	
Marital status	Married	21	70.00%	23	76.67%	$\chi 2$=0.38 p=0.83(NS)
	Unmarried	8	26.67%	6	20.00%	
	Separated	1	3.33%	1	3.33%	

Fig 1-10 NS=not significant p>0.05 not significant

Above table shows the Demographic information of tuberculosis clients those who are participated for the following study on "A study to assess the impact of multimodal nursing intervention on tuberculosis

management among clients with tuberculosis attending Government Thiruvatteeswarar Hospital of Thoracic Medicine at Chennai". Similarity of demographic information distribution between experiment and control group clients was assessed using chi square test.

Data presented in table 1 show the following :

Age: 6.67% of clients belongs to age group of 15-20 years and 20% of clients were 21-25 years and 33.33% of clients were 26-30 ears and 40.00% of clients were 31-35 years in experimental group, 10.00% of clients were15-20% belongs to age and 23.34% of clients were21-25 years and 33.33% of clients were 26-30 years and 33.33% of clients were 31-35 years in control group.

With regard to the age in experimental group,10 (6.67%) were belongs to 15-20 years of age, 10 (20.00%) were belongs to 20-25years of age, 6 (33.33%) were belongs to 26-30 years and in control group 10 (20.00)% were belongs to 15-20 years of age, 10 (23.34%) were belongs to 26-30 years of age, 5 (33.33%) were belongs to 31-35 years of age.

Regarding sex in experimental group, 0 (0.00%) were male students, 30 (100.00%) were female students and in control group 0 (0.00%) were male students, 30 (100.00%) were female students.

Regarding religion in experimental group 20 (73.33%) were Hindu students, 6 (16.67%) were belongs to Christian, 4 (10.00%) were Muslim students, and in control group 22 (80.00%) were Hindu students, 5 (13.33%) were Christian students, 3 (6.67%) were Muslim students.

Regarding Type of family in experimental group 18 (60.00%) were Nuclear family, 9 (30.00%) were Joint family, 3 (10.00%) were Extended family, and in control group 19 (63.33%) were Nuclear family, 8 (26.67%) were Joint family, 3 (10.00%) were Extended family

Regarding Education of clients in experimental group 15 (36.67%) were primary education , 10 (36.67%) were higher education, 3 (16.67%) were Under graduate, 2 (10.00%) were Post graduate, and in control group 12 (46.67%) were primaryeducation, 12 (33.33%) were higher education, 4 (13.33%) were Under graduate, 2 (6.67%) were Post graduate.

Regarding Occupation of clients in experimental group 10 (36.67%) were cooly daily wages, 6 (33.33%) were self employement, 12 (20.00%) were private job, 2 (10.00%) were Government job, and in control group 12(40.00%) were cooly daily wages, 7(30.00%) were self employement, 9(20.00%) were private job, 2(10.00%) were Government job.

Regarding Monthly income of clients in experimental group 13(46.67%) were received less than Rs 5000, 11(33.33%) were received Rs 50001 – 10000 , 6 (20.00%) were received 10001 –1 50000 , 0 (0.00%) were received above Rs 50000, and in control group 15 (43.33%) were received Rs 50000 , 8(30.00%) were received 50001 – 10000 , 7 (26.67%) were received Rs 10001 – 15000, 0(0.00%) were received above Rs 50000.

Regarding Living area in experimental group 6(30.00%) were lived in rural area, 11(43.33%) were lived in urban area,10(26.67) were lived in semi urban area, and in control group 8(23.33%) were lived in rural area, 10(46.67%) were lived in urban area,7(33.33%) were lived in semi urban area.

Regarding Number of persons in the family in experimental group 6(30.00%) were 2-3 persons, 11(46.67%) were 4-5 persons , 13(23.33%) were above 5 persons in the family, and in control group 7(33.33%) were 2-3 persons, 6(50.00%) were 4 -5 persons, 17(16.67%) were above 5 persons in the family.

Regarding Type of food in experimental group 6(20.00%) were vegetarian, Regarding Type of food in experimental group 6(20.00%) were vegetarian, 24(80.00%) were non vegetarian, and in control group 7(16.67%) were vegetarian, 23(83.33%) were non vegetarian.

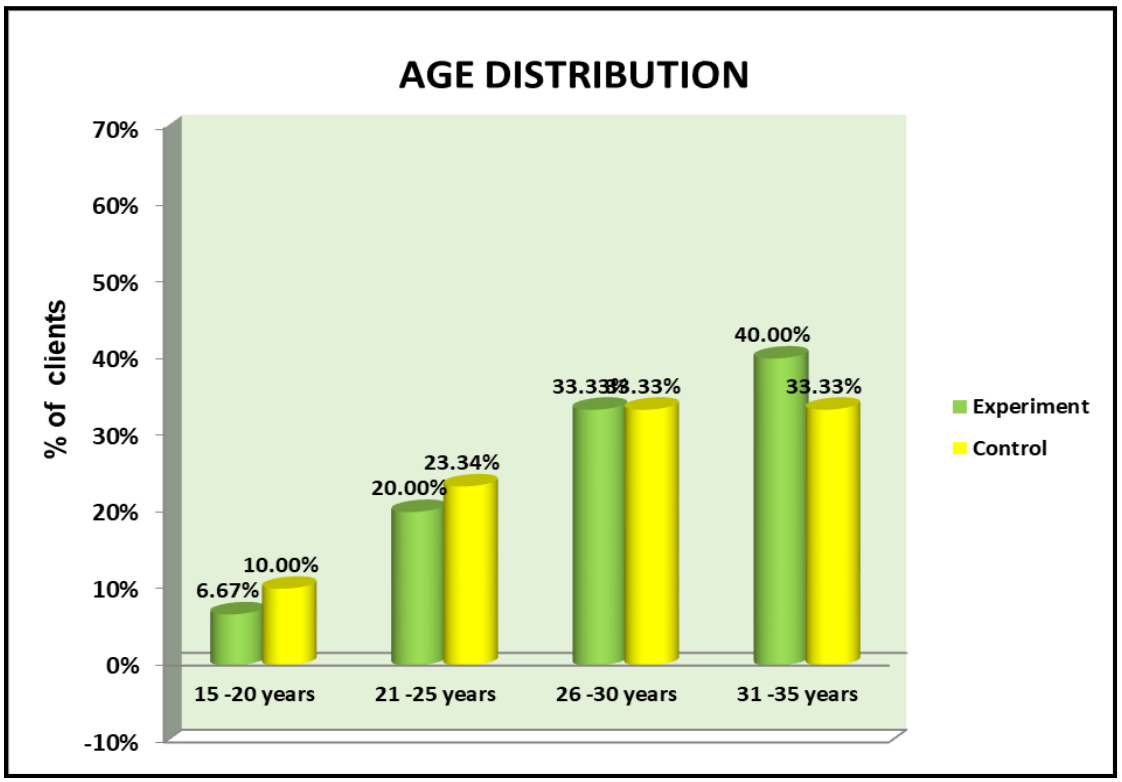


Fig 4.1 shows that experimental group,10 (6.67%) were belongs to 15-20 years of age, 10 (20.00%) were belongs to 20-25years of age, 6 (33.33%) were belongs to 26-30 years and in control group 10 (20.00)% were belongs to 15-20 years of age, 10 (23.34%) were belongs to 26-30 years of age, 5 (33.33%) were belongs to 31-35 years of age.

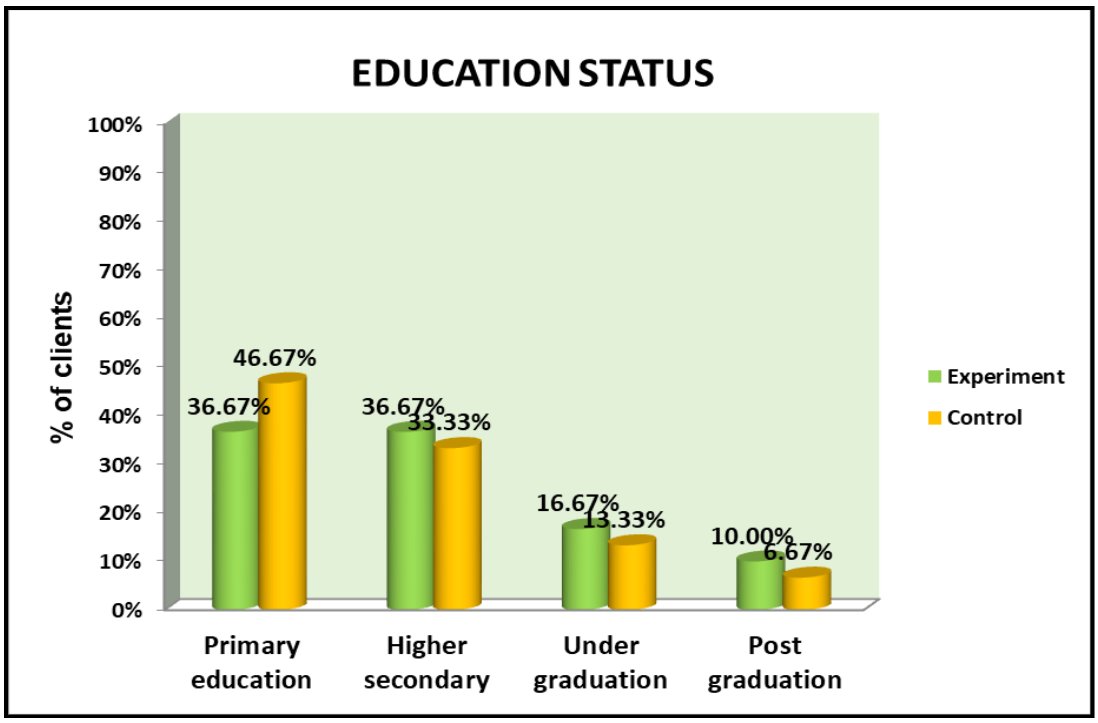


Fig 4.2 shows that in experimental group 15 (36.67%) were primary education , 10 (36.67%) were higher education, 3 (16.67%) were Under graduate, 2 (10.00%) were Post graduate, and in control group 12 (46.67%) were primaryeducation, 12 (33.33%) were higher education, 4 (13.33%) were Under graduate, 2 (6.67%) were Post graduate

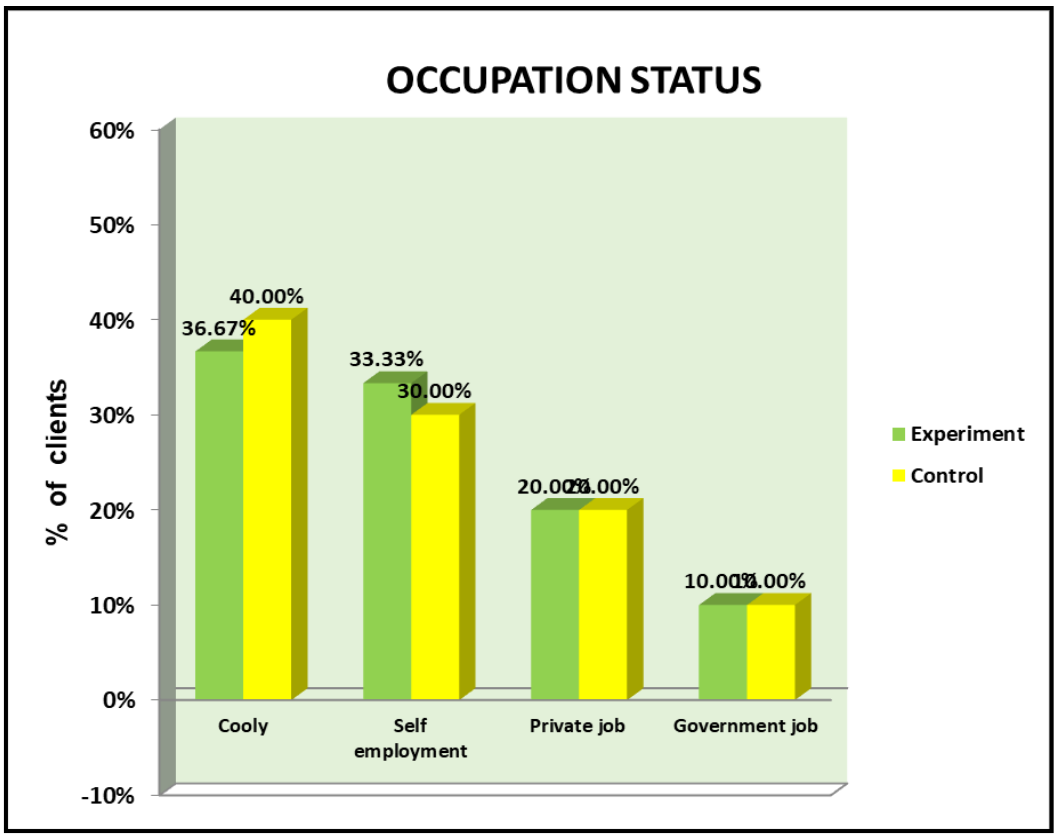


Fig 4.3 shows that Occupation of clients in experimental group 10 (36.67%) were cooly daily wages, 6 (33.33%) were self employement, 12 (20.00%) were private job, 2 (10.00%) were Government job, and in control group 12(40.00%) were cooly daily wages, 7(30.00%) were self employement, 9(20.00%) were private job, 2(10.00%) were Government job.

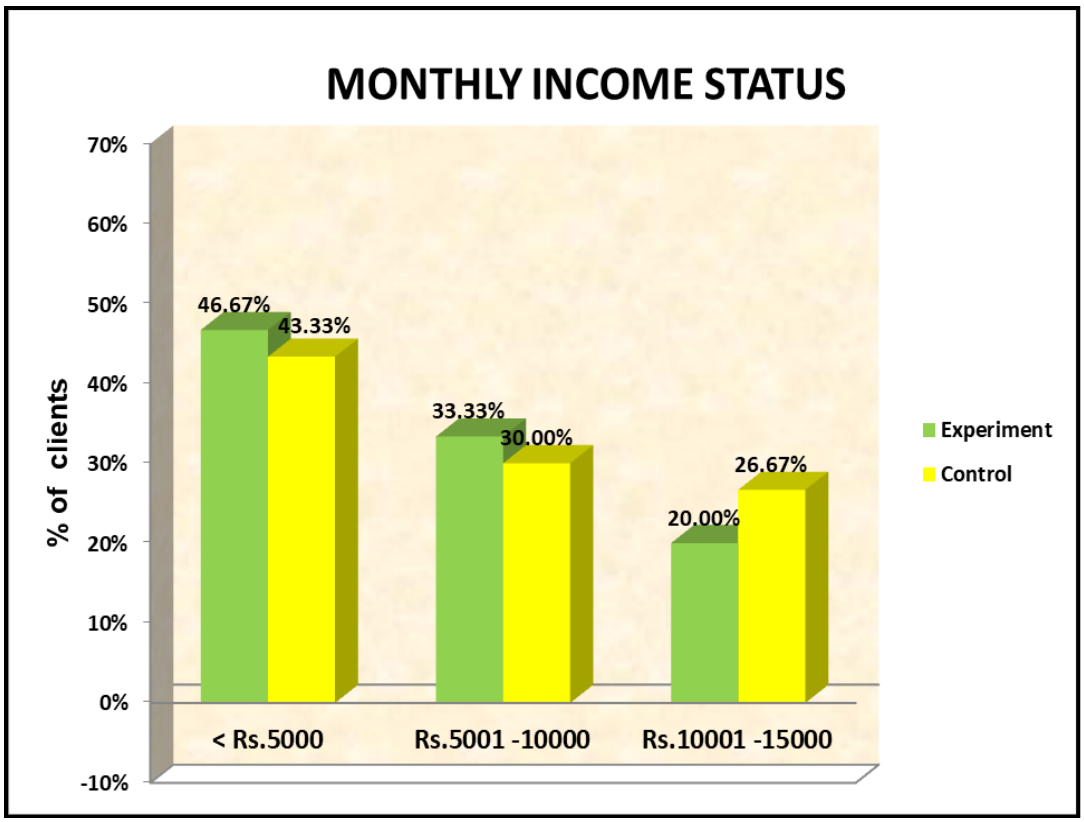
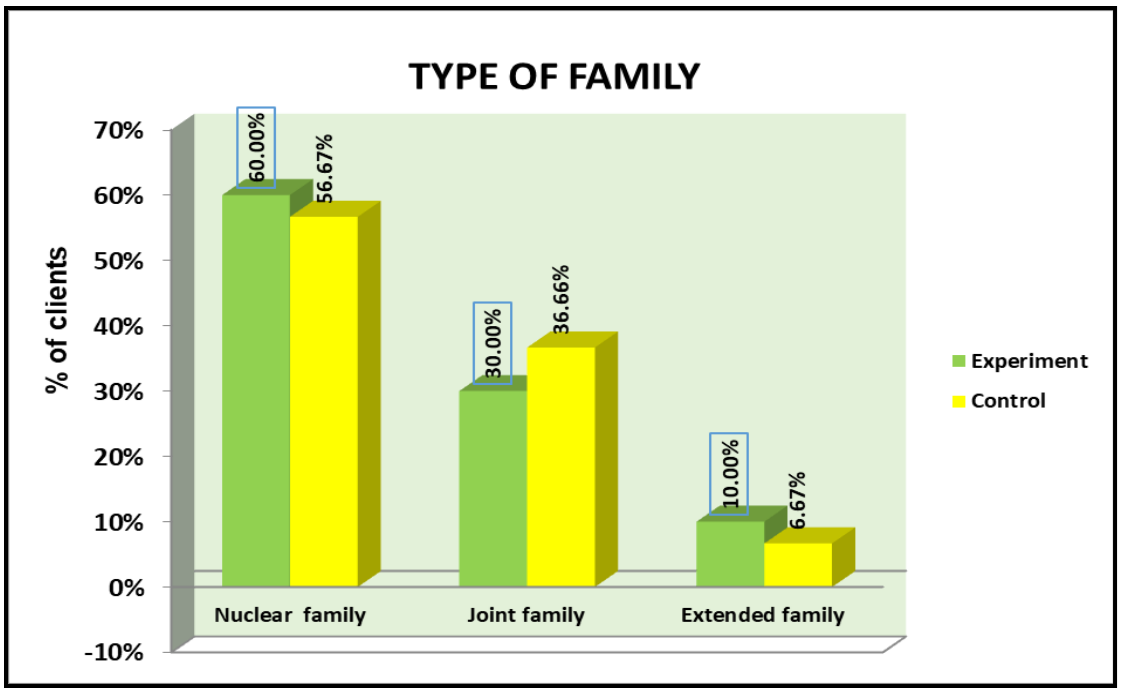
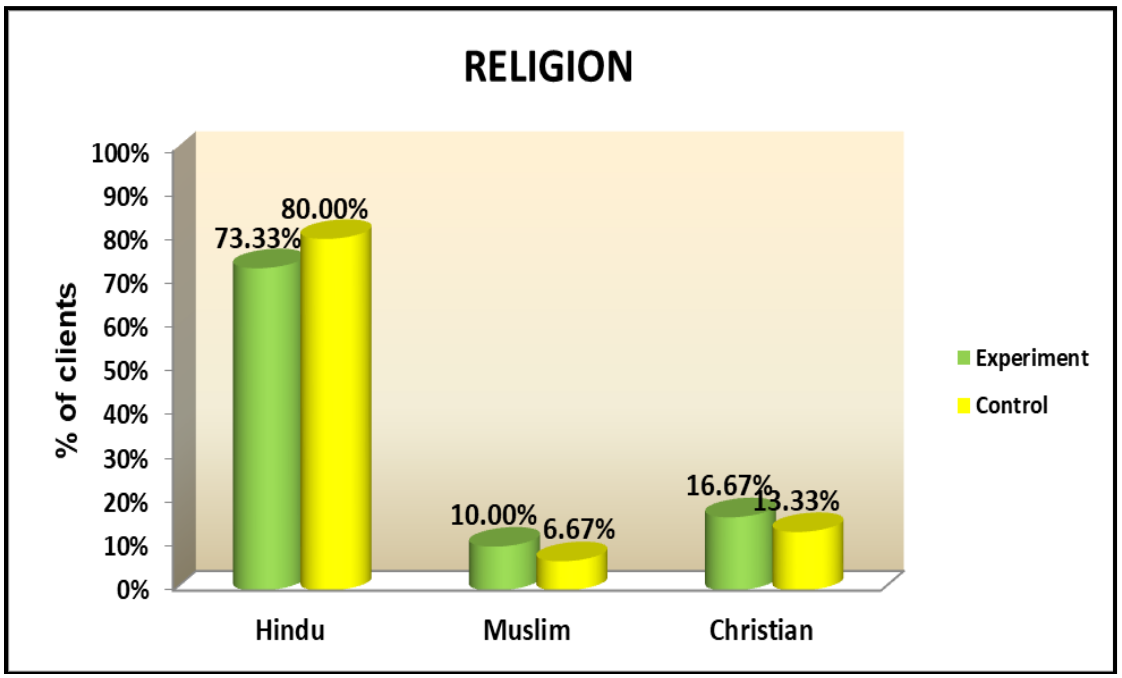


Fig.4.4 shows that in experimental group 13(46.67%) were received less than Rs 5000, 11(33.33%) were received Rs 50001 – 10000 , 6 (20.00%) were received 10001 –1 50000 , 0 (0.00%) were received above Rs 50000, and in control group 15 (43.33%) were received Rs 50000 , 8(30.00%) were received 50001 – 10000 , 7 (26.67%) were received Rs 10001 – 15000, 0(0.00%) were received above Rs 50000.

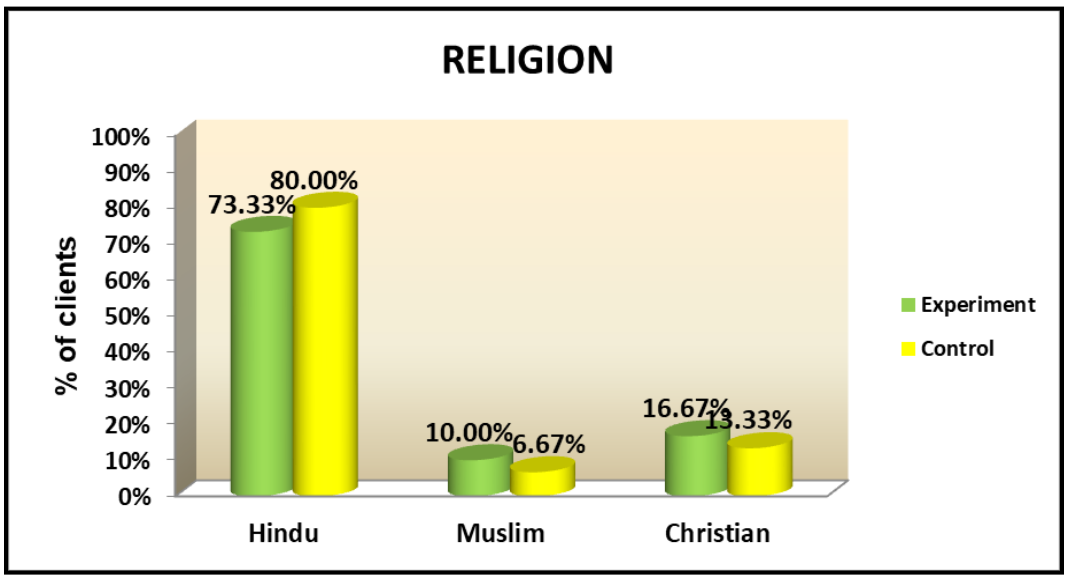


Figs.4.5 shows that the persons in the family in experimental group 6(30.00%) were 2-3 persons, 11(46.67%) were 4-5 persons , 13(23.33%) were above 5 persons in the family, and in control group 7(33.33%) were 2-3 persons, 6(50.00%) were 4 -5 persons, 17(16.67%) were above 5 persons in the family

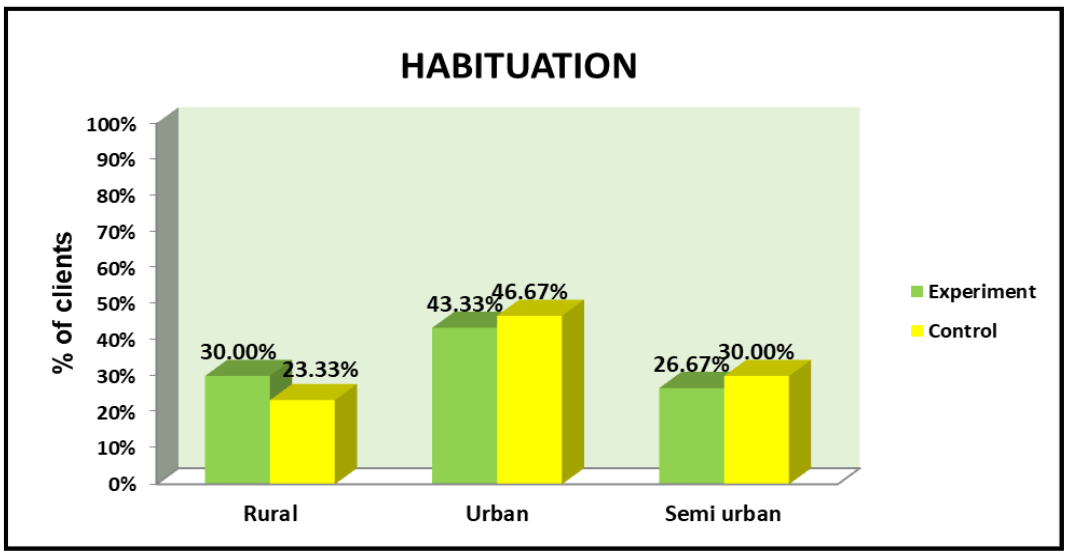


Figs.4.6 shows that religion in experimental group 20(73.335) were hindu students, 6 (16.67%) were belongs to Christian,4 (10.00%) were

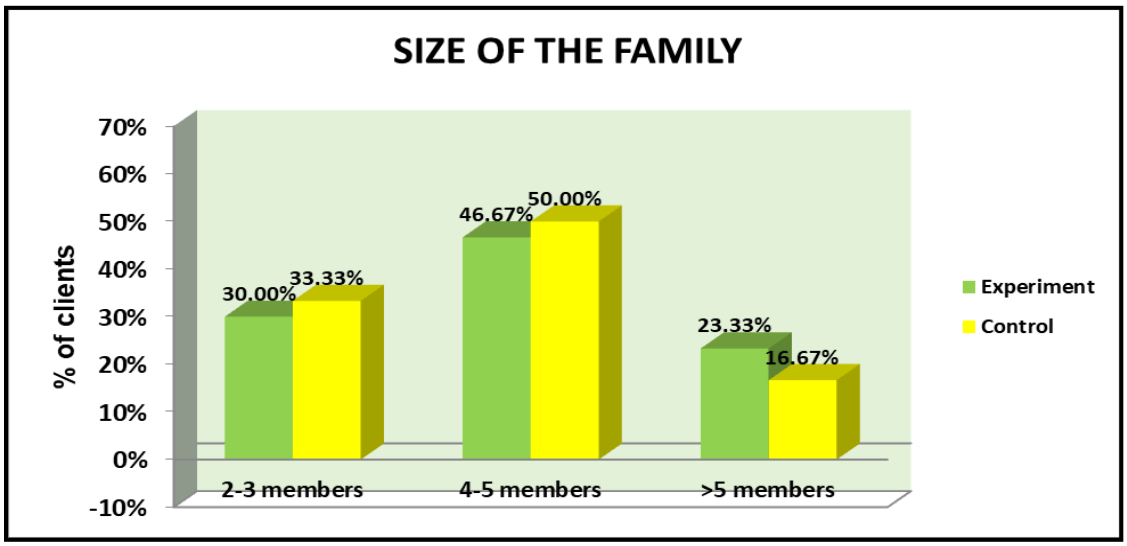
muslims students,and in control group 22 (80.00%) were hindu students, 5 (13.33%) were Christian students, 3 (6.67%) were muslim students.



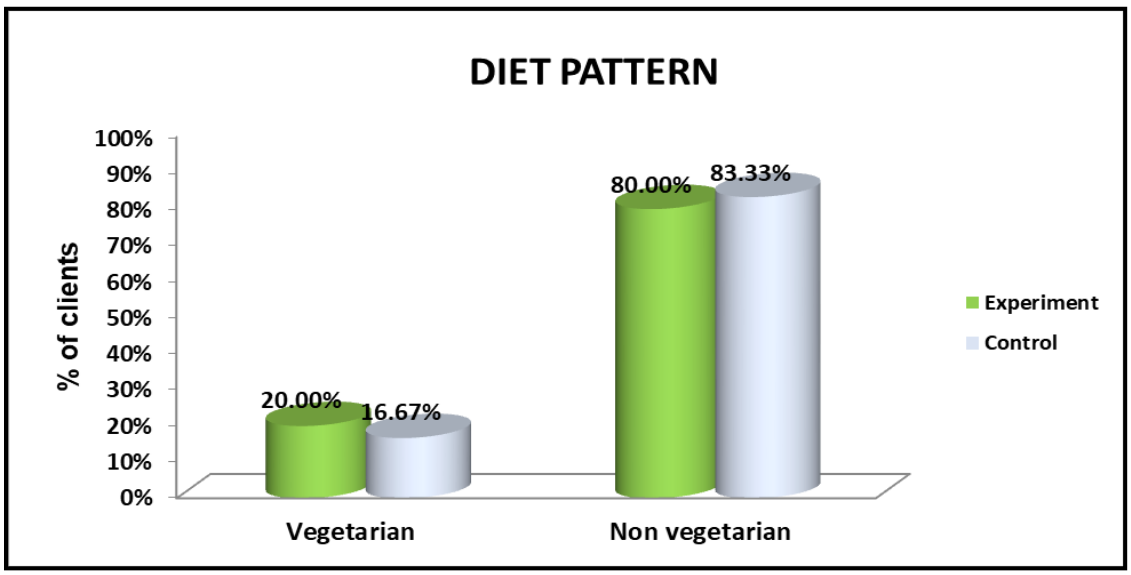
Regarding religion in experimental group 20 (73.33%) were Hindu students, 6 (16.67%) were belongs to Christian, 4 (10.00%) were Muslim students, and in control group 22 (80.00%) were Hindu students, 5 (13.33%) were Christian students, 3 (6.67%) were Muslim students.



Figs 4.7 shows that Living area in experimental group 6(30.00%) were lived in rural area, 11(43.33%) were lived in urban area,10(26.67) were lived in semi urban area, and in control group 8(23.33%) were lived in rural area, 10(46.67%) were lived in urban area,7(33.33%) were lived in semi urban area.



Figs.4.7 shows that Number of persons in the family in experimental group 6(30.00%) were 2-3 persons, 11(46.67%) were 4-5 persons , 13(23.33%) were above 5 persons in the family, and in control group 7(33.33%) were 2-3 persons, 6(50.00%) were 4 -5 persons, 17(16.67%) were above 5 persons in the family



Figs.4.8 shows that Type of food in experimental group 6(20.00%) were vegetarian, Regarding Type of food in experimental group 6(20.00%) were vegetarian, 24(80.00%) were non vegetarian, and in control group 7(16.67%) were vegetarian, 23(83.33%) were non vegetarian.

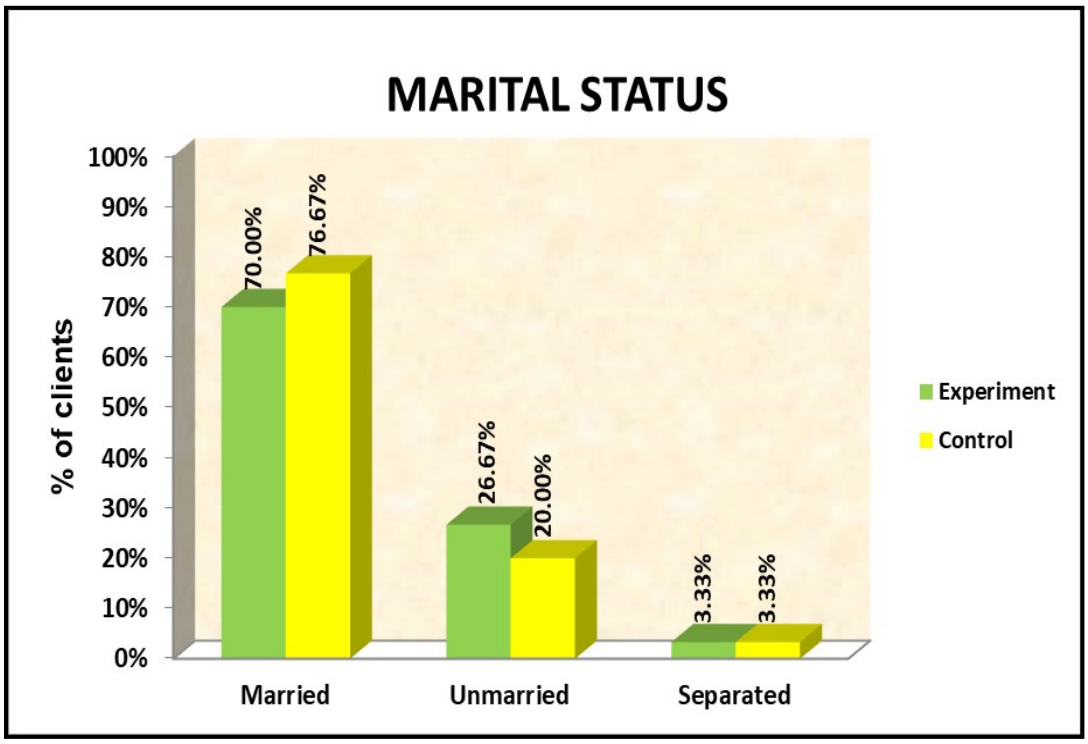


Fig.4.9 shows that (70.00%) of clients are married, (26.67%) of clients are unmarried,and (3.33%) of clients are separated in experimental group,(76.67%) of clients are married,(20.00%) of clients are unmarried, and (3.33%) of clients are separated in control group.

SECTION-II: DESCRIPTION OF PRE-TEST LEVEL OF KNOWLEDGE AMONG CLIENTS WITH TUBERCULOSIS.

Table-3: Comparison Of Mean Pretest Quality Of Life Score Between Experimental And Control Group

S No	Domains	Knowledge score				Mean difference	Student independent t-test
		Experiment		Control			
		Mean	SD	Mean	SD		
1	General information	2.60	.97	2.63	.96	-0.03	t=0.13 p=0.89(NS)
2	Causes of Tuberculosis	1.07	.78	1.10	.55	-0.03	t=0.19 p=0.85(NS)
3	Clinical manifestation	0.70	.75	0.63	.72	0.07	t=0.35 p=0.72(NS)
4	Diagnosis of Tuberculosis	1.23	.73	1.17	.79	0.06	t=0.34 p=0.74(NS)
5	Prevention of Tuberculosis	2.20	1.16	2.40	1.10	-0.20	t=0.69 p=0.50(NS)
	Overall	7.80	2.81	7.93	2.59	-0.13	t=0.19 p=0.85(NS)

P>0.05 not significant NS=not signific

Considering pretest knowledge score between experiment and control group, it shows, In experimental group clients are having 7.80 knowledge score and in control group clients are having 7.93knowledge score, so the difference is 0.13, this difference is small and it is not statistically significant difference. Statistical significance was calculated using student independent t-test.

Table-4: Each Domainwise Percentage Of Difference In Pretest Knowledge Score

S. No.	Domains	Experiment	Control	% of knowledge difference
1.	General information	43.33%	43.83%	-0.50%
2.	Causes of Tuberculosis	35.67%	36.67%	-1.00%
3.	Clinical manifestation	35.00%	31.50%	3.50%
4	Diagnosis of Tuberculosis	41.00%	39.00%	2.00%
5	Prevention of Tuberculosis	36.67%	40.00%	-3.33%
	Overall	39.00%	39.65%	-0.65%

Fig11Table 5 shows the each domainwise percentage of pretest knowledge score difference among experiment and control group clients. Overall experiment and control group of clients are having 0.65% of knowledge score difference.

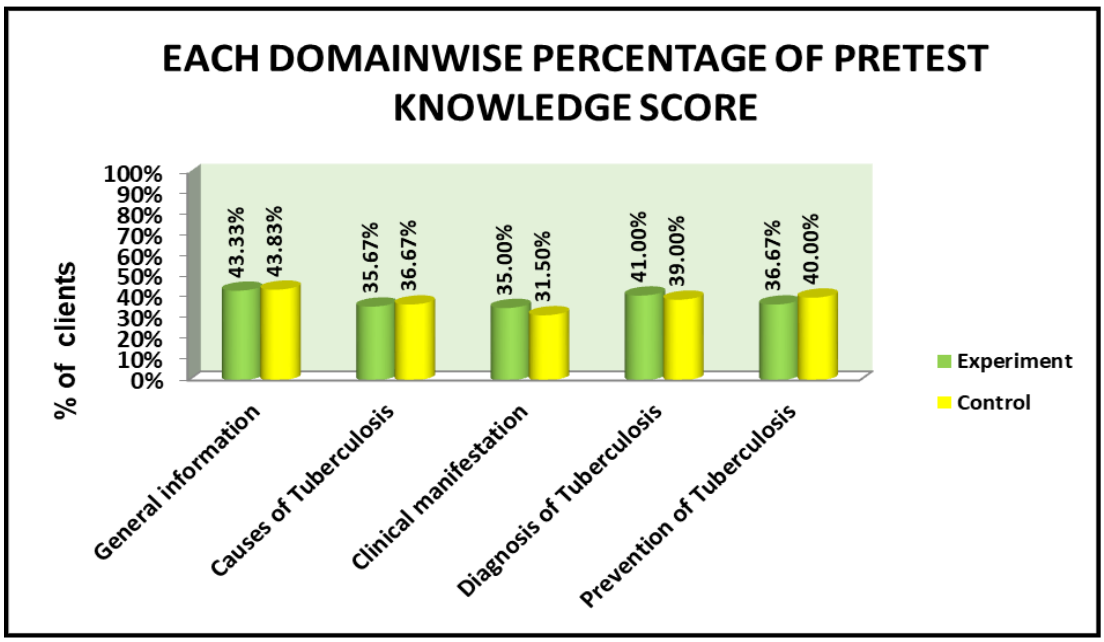


Table-5:Comparison Of Pretest Level Of Knowledge Score

Level of knowledge	Experiment		Control		Chi square test
	n	%	n	%	
Inadequate	24	80.00%	22	73.33%	$\chi 2=0.37$ p=0.54(NS)
Moderate	6	20.00%	8	26.67%	
Adequate	0	0.00%	0	0.00%	
Total	30	100.00%	30	100.00%	

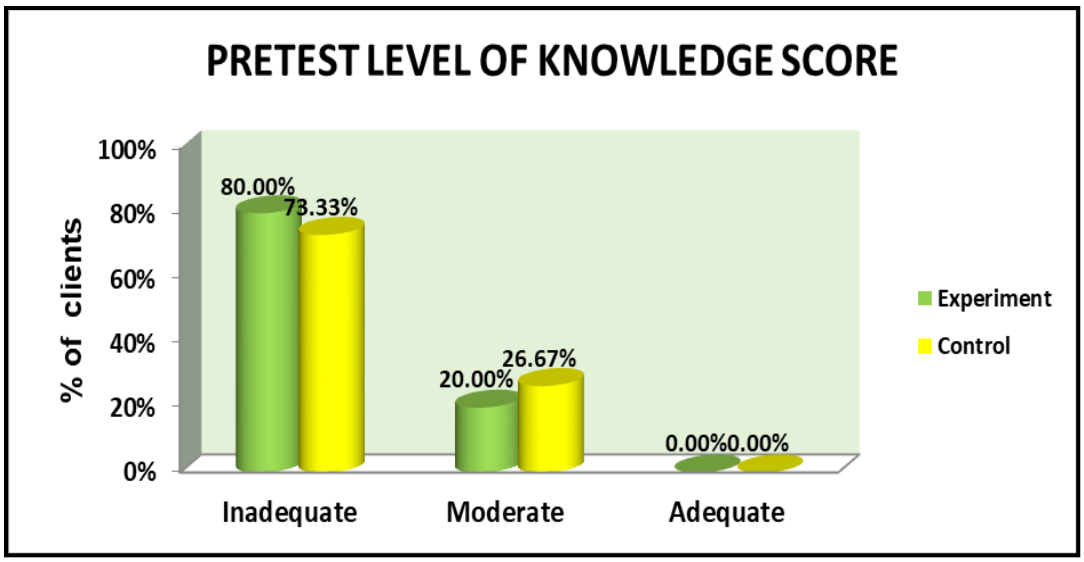
Fig12p>0.05 not significant NS=not significant

Table no.5 compares the pretest level of Knowledge score between experimental and control clients.

Before **multimodal nursing intervention**, in experimental group, 80.00% of the clients are having inadequate level of Knowledge score , 20.00% of them having moderate level of Knowledge score and none of them are having Adequate level of Knowledge score .

In control group 66.67% of the clients are having inadequate level of Knowledge score, 33.33% of them having moderate level of Knowledge score and none of them are having Adequate level of Knowledge score .

Statistically there is no significant difference between experimental and control group. Level of Knowledge score between experimental and control group was calculated using chi-square test.



Knowledge score interpretation

Min=0 Max=1 Total questions =20 Total score= 20

S.No.	Level of Knowledge	Percentage	Score
1.	Inadequate	0 – 40%	0-8
2.	Moderate	41 – 70%	9-14
3.	Adequate	71 – 100 %	15-20

Table-6: Comparison Of Overall Mean Pretest Knowledge Score

Group	N	Mean	Std. Deviation	Mean difference	Student's independent t-test
Experiment	30	7.80	2.81	0.13	t=0.19 P=0.85 DF = 58, not significant
Control	30	7.93	2.59		

P>0.05 not significant DF=Degrees of Freedom

Table no 6 shows the comparison of overall pre-test mean Knowledge score before administration of **multimodal nursing intervention**.

On an average, experimental group clients are having 7.80 knowledge score and in control group clients are having 7.93knowledge

score, so the difference is 0.13, this difference is small and it is not statistically significant difference. Statistical significance was calculated using student independent t-test.

Table 7: Comparison Of Mean Pretestknowledge Score Between Experimental And Control Group

S No	Domains	knowledge score				Mean difference	Student independent t-test
		Experiment (n=30)		Control (n=30)			
		Mean	SD	Mean	SD		
1	General information	4.87	.78	2.73	.94	2.14	t=9.56p=0.001*** DF=58(S)
2	Causes of Tuberculosis	2.30	.53	1.13	.57	1.17	t=8.16p=0.001*** DF=58(S)
3	Clinical manifestation	1.47	.51	0.70	.75	0.77	t=4.64p=0.001*** DF=58(S)
4	Diagnosis of Tuberculosis	2.40	.62	1.23	.86	1.17	t=6.03p=0.001*** DF=58(S)
5	Prevention of Tuberculosis	4.50	.78	2.37	1.16	2.13	t=8.37p=0.001*** DF=58(S))
	Overall	15.53	2.00	8.17	2.31	7.36	t=13.23p=0.001*** DF=58(S)

P>0.05 not significant S=not significant

Considering pretest knowledge score between experiment and control group, it shows, In experimental group clients are having15.53knowledge score and in control group clients are having 8.17knowledge score, so the difference is 7.36, this difference is small and it is statistically significant difference. Statistical significance was calculated using student independent t-test.

SECTION-III: DESCRIPTION OF POST-TEST LEVEL OF KNOWLEDGE AMONG CLIENTS WITH TUBERCULOSIS

Table 8: Each Domainwise Posttest Percentage Of Knowledge

Sno	Domains	No. of questions	Experiment			Control		
			Mean	SD	% of mean score	Mean	SD	% of mean score
1	General information	6	4.87	0.78	81.17%	2.73	0.94	45.50%
2	Causes of Tuberculosis	3	2.30	0.53	76.67%	1.13	0.57	37.67%
3	Clinical manifestation	2	1.47	0.51	73.50%	0.70	0.75	35.00%
4	Diagnosis of Tuberculosis	3	2.40	0.62	80.00%	1.23	0.86	41.00%
5	Prevention of Tuberculosis	6	4.50	0.78	75.00%	2.37	1.16	39.50%
	Overall	20	15.53	2.00	77.65%	8.17	2.31	40.85%

Table 7 shows each domain wise post-test percentage of knowledge score among experimental and control group of Psoriasis clients.

In experiment group, they are having maximum knowledge score in General information (81.17%) and minimum knowledge score in clinical manifestation (73.50%). Overall pretest percentage of knowledge score is 77.65%.

In control group, they are having maximum knowledge score in General information (45.53%) and minimum knowledge score in clinical manifestation (35.00%). Overall pretest percentage of knowledge score is 40.85%.

Table-9: Each Domainwise Percentage Of Knowledge Difference In Posttest

S. No.	Domains	Experiment	Control	% of knowledge Difference
1.	General information	81.17%	45.50%	35.67%
2.	Causes of Tuberculosis	76.67%	37.67%	39.00%
3.	Clinical manifestation	73.50%	35.00%	38.50%
4	Diagnosis of Tuberculosis	80.00%	41.00%	39.00%
5	Prevention of Tuberculosis	75.00%	39.50%	35.50%
	Overall	77.65%	40.85%	36.80%

Fig 13Table 9 shows the each domainwise percentage of posttest knowledge score difference among experiment and control group clients. Overall difference between experiment and control group of clients was36.80% of knowledge score.

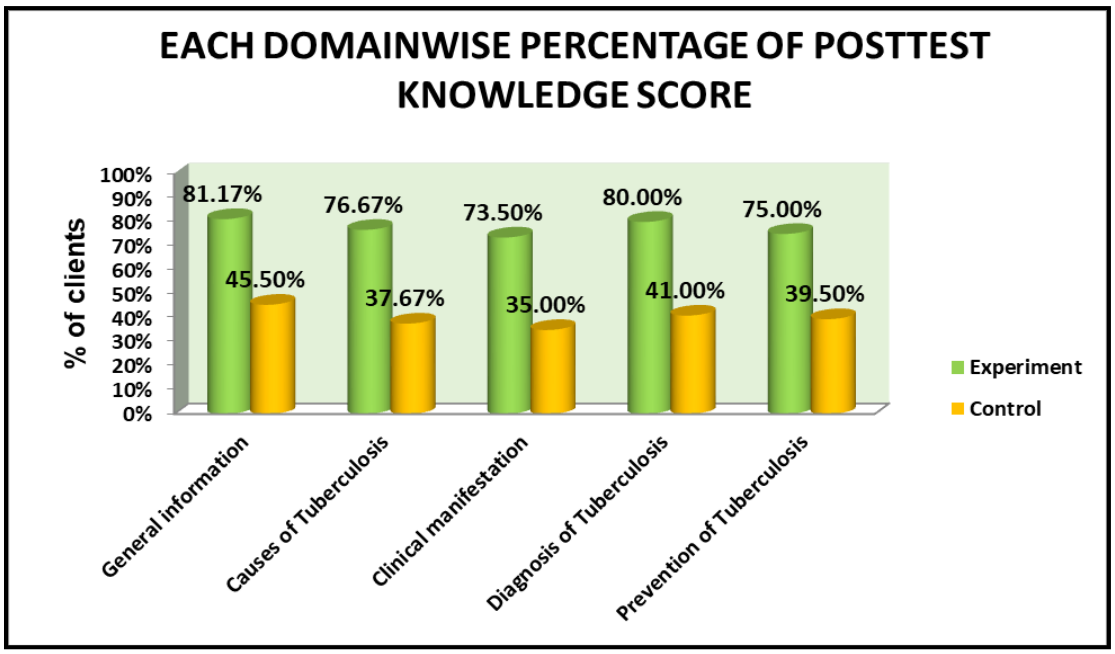


Table-10: Comparison Of Posttest Level Of Knowledge Score

Level of knowledge	Experiment		Control		Chi square test
	n	%	n	%	
Inadequate	0	0.00%	20	66.67%	$\chi 2=43.52$ p=0.001***DF=2 significant
Moderate	7	23.33%	10	33.33%	
Adequate	23	76.67%	0	0.00%	
Total	30	100.00%	30	100.00%	

Fig14 ***p≤0.001very high significant

Table no.10 compares the posttest level of Knowledge score between experimental and control clients.

After **multimodal nursing intervention**, in experimental group, none of the clients are having inadequate level of Knowledge score , 23.33% of them having moderate level of Knowledge score and 76.67% of them are having Adequate level of Knowledge score .

In control group 66.67% of the clients are having inadequate level of Knowledge score, 33.33% of them having moderate level of Knowledge score and none of them are having Adequate level of Knowledge score .

Statistically there is a significant difference between experimental and control group. Level of Knowledge score between experimental and control group was calculated using chi-square test.

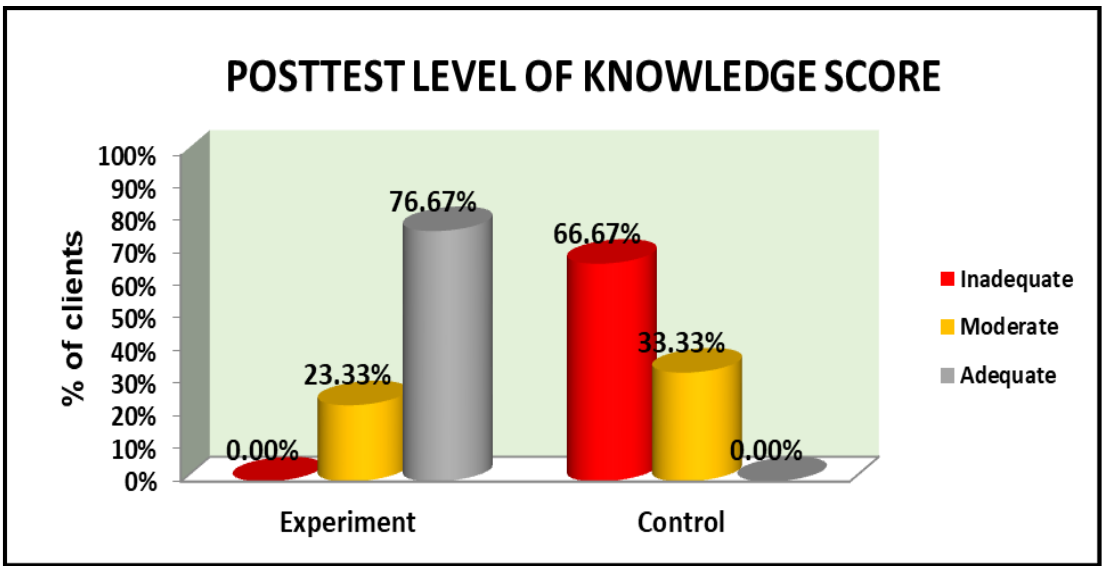


Table 11: Comparison Of Overall Mean Posttest Knowledge Score

Group	N	Mean	Std. Deviation	Mean difference	Student's independent t-test
Experiment	30	15.53	2.00	7.36	t=13.23p=0.001 DF = 58, significant
Control	30	8.17	2.31		

P>0.05 not significant DF=Degrees of Freedom

Table no 11 shows the comparison of overall post-test mean Knowledge score afteradministration of **multimodal nursing intervention**.

On an average, experimental group clients are having 15.53knowledge score and in control group clients are having 8.17knowledge score, so the difference is 7.36, this difference is large and it is statistically significant difference. Statistical significance was calculated using student independent t-test.

Table-12: Comparison Of Pretest And Posttest Mean Knowledge Score (Experiment)

S No	Domains	Knowledge score				Mean difference	Student paired t-test
		Pretest		Posttest			
		Mean	SD	Mean	SD		
1	General information	2.60	.97	4.87	.78	2.27	t=9.87p=0.001*** DF=29(S)
2	Causes of Tuberculosis	1.07	.78	2.30	.53	1.23	t=6.95p=0.001*** DF=29(S)
3	Clinical manifestation	0.70	.75	1.47	.51	0.77	t=3.80p=0.001*** DF=29(S)
4	Diagnosis of Tuberculosis	1.23	.73	2.40	.62	1.17	t=7.31p=0.001*** DF=29(S)
5	Prevention of Tuberculosis	2.20	1.16	4.50	.78	2.3	t=9.04p=0.001*** DF=29(S)
	Total	7.80	2.81	15.53	2.00	7.73	t=11.79p=0.001*** DF=29(S)

***P<0.001 very high significant S= significant

In experimental group, in pretest, clients are having 7.80 Knowledge score and in posttest, clients are having 15.53 Knowledge score, so the difference is 7.73, this difference is large and it is statistically significant difference. Statistical significance was calculated using student paired t-test.

Table-13: Comparison Of Pretest And Posttest Mean Knowledge Score (Control)

S No	Domains	Knowledge score				Mean difference	Student paired t-test
		Pretest		Posttest			
		Mean	SD	Mean	SD		
1	General information	2.63	.96	2.73	.94	0.10	t=1.20 p=0.27DF=29 (NS)
2	Causes of Tuberculosis	1.10	.55	1.13	.57	0.03	t=1.00 p=0.32DF=29 (NS)
3	Clinical manifestation	0.63	.72	0.70	.75	0.07	t=0.81 p=0.42DF=29 (NS)
4	Diagnosis of Tuberculosis	1.17	.79	1.23	.86	0.06	t=1.05 p=0.30DF=29 (NS)
5	Prevention of Tuberculosis	2.40	1.10	2.37	1.16	-0.03	t=0.44 p=0.66DF=29 (NS)
	Total	7.93	2.59	8.17	2.31	0.24	t=1.31 p=0.19DF=29 (NS)

p>0.05 not significant

In control group, in pretest , clients are having 7.93Knowledge score and in posttest, clients are having 8.17 Knowledge score, so the difference is 0.24, this difference is small and it is not statistically significant difference. Statistical significance was calculated using student paired t-test.

SECTION-IV : EFFECTIVENESS OF MULTIMODAL NURSING INTERVENTION AND GENERALIZATION OF KNOWLEDGE GAIN SCORE.

Table-14: Comparison Of Pretest And Posttest Level Of Knowledge Score

	Level	Pretest		Posttest		Extended McNemar's test
		n	%	n	%	
Experiment	Inadequate	24	80.00%	0	0.00%	$\chi 2=25.42 DF=2$ $p=0.001^{***}$ significant
	Moderate	6	20.00%	7	23.33%	
	Adequate	0	0.00%	23	76.67%	
	Total	30	100.00%	30	100.00%	
Control	Inadequate	22	73.33%	20	66.67%	$\chi 2=2.00 DF=1$ $p=0.16$ not significant
	Moderate	8	26.67%	10	33.33%	
	Adequate	0	0.00%	0	0.00%	
	Total	30	100.00%	30	100.00%	

Fig15$p \leq 0.001$ *** very high significant $p>0.05$ not significant

Table no.14compares the level of Knowledge score between pre-test and post-test score.

In experimental group, there is a significant difference between pretest and posttest knowledge score But in control group there is no significant difference between pretest and posttest knowledge score

Pretest and posttest Knowledge score was calculated using Extended McNemar's test.

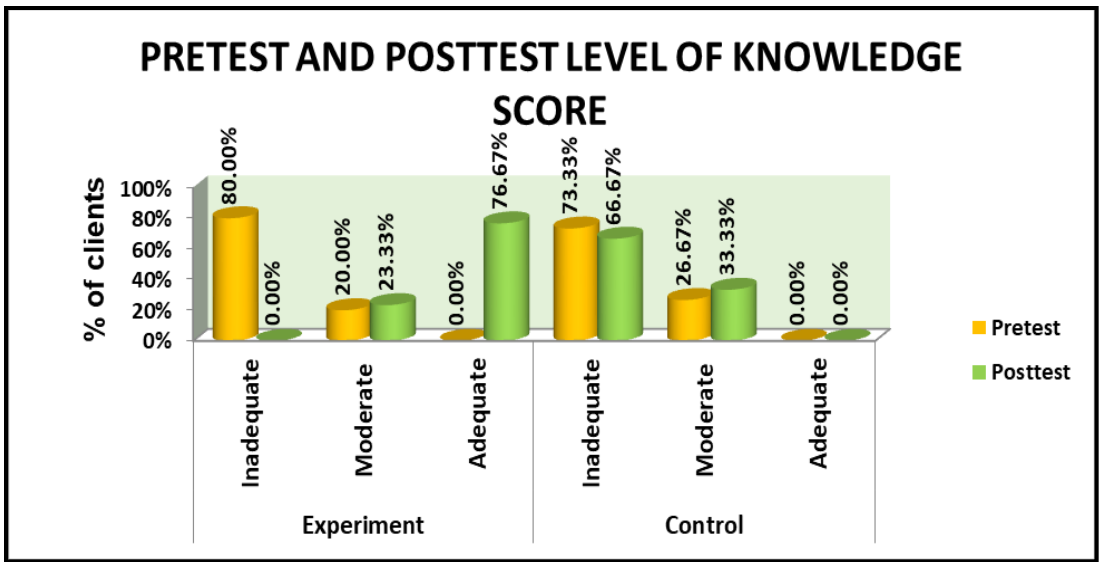


Table-15: Comparison Of Pretest And Posttest Mean Knowledge Score

Group		N	Mean	SD	Mean gain score	Paired t-test
Experiment	Pre-test	30	7.80	2.81	7.73	t=11.79 p=0.001*** (S)
	Post-test	30	15.53	2.00		
Control	Pre-test	30	7.93	2.59	0.24	t=1.31 p=0.19(NS)
	Post-test	30	8.17	2.31		

Fig16 Considering Experimental group Knowledgescore, clients are having 7.80Knowledge score and in posttest, clients are having 15.53Knowledge score, so the difference is 7.73, this difference is large and it is statistically significant difference. Statistical significance was calculated using student paired t-test.

In control group, in pretest , clients are having 7.93Knowledge score and in posttest, clients are having 8.17 Knowledge score, so the difference is 0.24, this difference is small and it is not statistically significant difference. Statistical significance was calculated using student paired t-test.

Statistical significance difference between pre-test and post-test was calculated using student paired t-test.

Table-16: Effectiveness Of Multimodal Nursing Interventionand Generalization Of Knowledge Gain Score

Group	Test	Maximum score	Mean score	% of mean score	Mean Difference of Knowledge gain score with 95% Confidence interval	Percentage Difference of Knowledge gain score with 95% Confidence interval
Experiment	Pretest	20	7.80	39.00%	7.73 (6.39 – 9.07)	38.65% (31.95% – 45.35%)
	Posttest	20	15.53	77.65%		
Control	Pretest	20	7.93	39.65%	0.23 (-0.13 – 0.59)	1.15% (-0.65% – 2.95%)
	Posttest	20	8.17	40.85%		

Above table shows the effectiveness of **multimodal nursing intervention** among clients with Psoriasis.

Experimental group gained 38.65% Knowledge score after having intervention whereas control group gained only 1.15% Knowledgescore without intervention.

Differences and generalization of Knowledgescore between pretest and posttest score was calculated using and mean difference with 95% CI and proportion with 95% CI.

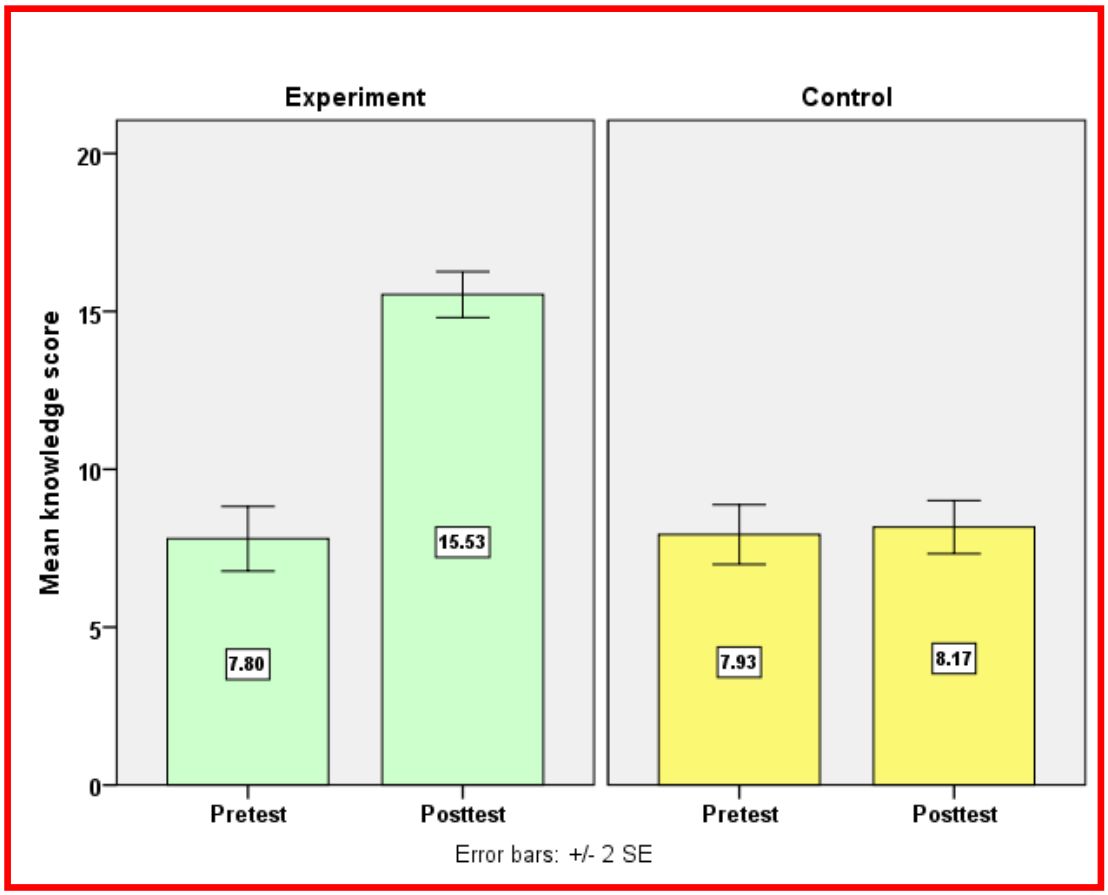


Fig 16: Simple bar with 95% Standard Error bar diagram compares the pretest and posttest knowledge score among experiment group and control group

Table-17: Association Between Pre-Test Level Of Knowledge Score And Demographic Variables (Experiment)

Demographic Variables		Pre-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Age	15 -20 years	2	100.00%	0	0.00%	0	0.00%	2	$\chi 2=1.25$ p=0.74(NS)
	21 -25 years	4	66.67%	2	33.33%	0	0.00%	6	
	26 -30 years	8	80.00%	2	20.00%	0	0.00%	10	
	31 -35 years	10	83.33%	2	16.67%	0	0.00%	12	
Education	Non formal education	0	0.00%	0	0.00%	0	0.00%	0	$\chi 2=1.52$ p=0.68(NS)
	Primary education	8	72.73%	3	27.27%	0	0.00%	11	
	Higher secondary	10	90.91%	1	9.09%	0	0.00%	11	
	Under graduation	4	80.00%	1	20.00%	0	0.00%	5	
	Post-graduation	2	66.67%	1	33.33%	0	0.00%	3	
Occupation	Cooly	9	81.82%	2	18.18%	0	0.00%	11	$\chi 2=1.44$ p=0.69(NS)
	Self-employment	7	70.00%	3	30.00%	0	0.00%	10	
	Private job	5	83.33%	1	16.67%	0	0.00%	6	
	Government job	3	100.00%	0	0.00%	0	0.00%	3	
	Business	0	0.00%	0	0.00%	0	0.00%	0	
Monthly income	< Rs.5000	11	78.57%	3	21.43%	0	0.00%	14	$\chi 2=0.06$ p=0.97(NS)
	Rs.5001 - 10000	8	80.00%	2	20.00%	0	0.00%	10	
	Rs.10001 - 15000	5	83.33%	1	16.67%	0	0.00%	6	
	Rs.15001 - 20000	0	0.00%	0	0.00%	0	0.00%	0	

Demographic Variables		Pre-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Type of family	Nulear family	15	83.33%	3	16.67%	0	0.00%	18	$\chi 2$=0.49 p=0.78(NS)
	Joint family	7	77.78%	2	22.22%	0	0.00%	9	
	Extended family	2	66.67%	1	33.33%	0	0.00%	3	
	Seperated family	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	17	77.27%	5	22.73%	0	0.00%	22	$\chi 2$=0.85 p=0.65(NS)
	Muslim	3	100.00%	0	0.00%	0	0.00%	3	
	Christian	4	80.00%	1	20.00%	0	0.00%	5	
Habituation	Rural	9	100.00%	0	0.00%	0	0.00%	9	$\chi 2$=3.32 p=0.19(NS)
	Urban	9	69.23%	4	30.77%	0	0.00%	13	
	Semi urban	6	75.00%	2	25.00%	0	0.00%	8	
	Hills area	0	0.00%	0	0.00%	0	0.00%	0	
Size of the family	2-3 members	9	100.00%	0	0.00%	0	0.00%	9	$\chi 2$=3.21 p=0.20(NS)
	4-5 members	10	71.43%	4	28.57%	0	0.00%	14	
	>5 members	5	71.43%	2	28.57%	0	0.00%	7	
Diet	Vegetarian	5	83.33%	1	16.67%	0	0.00%	6	$\chi 2$=0.05 p=0.82(NS)
	Non vegetarian	19	79.17%	5	20.83%	0	0.00%	24	
Marriage status	Married	18	85.71%	3	14.29%	0	0.00%	21	$\chi 2$=2.21 p=0.33(NS)
	Unmarried	5	62.50%	3	37.50%	0	0.00%	8	
	Divorced	0	0.00%	0	0.00%	0	0.00%	0	
	Separated	1	100.00%	0	0.00%	0	0.00%	1	

p>0.05 not significant NS= not significant

Above table shows the association between pre-test level of Knowledge score and Demographic variables among experiment group. None of the variables are significant It was confirmed using chi square test.

Table-18: Association Between Pre-Test Level Of Knowledge Score And Demographic Variables (Control)

Demographic Variables		Pre-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Age	15 -20 years	3	100.00%	0	0.00%	0	0.00%	3	$\chi 2=2.31$ p=0.51(NS)
	21 -25 years	4	57.14%	3	42.86%	0	0.00%	7	
	26 -30 years	7	70.00%	3	30.00%	0	0.00%	10	
	31 -35 years	8	80.00%	2	20.00%	0	0.00%	10	
Education	Non formal education	0	0.00%	0	0.00%	0	0.00%	0	$\chi 2=3.12$ p=0.37(NS)
	Primary education	10	71.43%	4	28.57%	0	0.00%	14	
	Higher secondary	6	60.00%	4	40.00%	0	0.00%	10	
	Under graduation	4	100.00%	0	0.00%	0	0.00%	4	
	Post-graduation	2	100.00%	0	0.00%	0	0.00%	2	
Occupation	Cooly	6	50.00%	6	50.00%	0	0.00%	12	$\chi 2=6.70$ p=0.08(NS)
	Self-employment	8	88.89%	1	11.11%	0	0.00%	9	
	Private job	6	100.00%	0	0.00%	0	0.00%	6	
	Government job	2	66.67%	1	33.33%	0	0.00%	3	
	Business	0	0.00%	0	0.00%	0	0.00%	0	
Monthly income	< Rs.5000	8	61.54%	5	38.46%	0	0.00%	13	$\chi 2=2.06$ p=0.36(NS)
	Rs.5001 - 10000	8	88.89%	1	11.11%	0	0.00%	9	
	Rs.10001 - 15000	6	75.00%	2	25.00%	0	0.00%	8	
	Rs.15001 - 20000	0	0.00%	0	0.00%	0	0.00%	0	

Demographic Variables		Pre-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Type of family	Nulear family	13	76.47%	4	23.53%	0	0.00%	17	$\chi 2=0.64$ p=0.72(NS)
	Joint family	8	72.73%	3	27.27%	0	0.00%	11	
	Extended family	1	50.00%	1	50.00%	0	0.00%	2	
	Seperated family	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	16	66.67%	8	33.33%	0	0.00%	24	$\chi 2=2.72$ p=0.25(NS)
	Muslim	2	100.00%	0	0.00%	0	0.00%	2	
	Christian	4	100.00%	0	0.00%	0	0.00%	4	
Habituation	Rural	6	85.71%	1	14.29%	0	0.00%	7	$\chi 2=1.22$ p=0.54(NS)
	Urban	9	64.29%	5	35.71%	0	0.00%	14	
	Semi urban	7	77.78%	2	22.22%	0	0.00%	9	
	Hills area	0	0.00%	0	0.00%	0	0.00%	0	
Size of the family	2-3 members	7	70.00%	3	30.00%	0	0.00%	10	$\chi 2=2.21$ p=0.33(NS)
	4-5 members	10	66.67%	5	33.33%	0	0.00%	15	
	>5 members	5	100.00%	0	0.00%	0	0.00%	5	
Diet	Vegetarian	4	80.00%	1	20.00%	0	0.00%	5	$\chi 2=0.14$ p=0.71(NS)
	Non vegetarian	18	72.00%	7	28.00%	0	0.00%	25	
Marriage status	Married	16	69.57%	7	30.43%	0	0.00%	23	$\chi 2=0.84$ p=0.65(NS)
	Unmarried	5	83.33%	1	16.67%	0	0.00%	6	
	Divorced	0	0.00%	0	0.00%	0	0.00%	0	
	Separated	1	100.00%	0	0.00%	0	0.00%	1	

p>0.05 not significant NS= not significant

Above table shows the association between pre-test level of Knowledge score and Demographic variables among control group. None of the variables are significant.It was confirmed using chi square test.

SECTION-VI :ASSOCIATION BETWEEN THE POST TEST KNOWLEDGE GAIN SCORE AND SELECTED DEMOGRAPHIC VARIABLES.

Table-19: Association Between Posttest Level Of Knowledge Score And Demographic Variables (Experiment)

Demographic Variables		Post-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Age	15 -20 years	0	0.00%	2	100.00 %	0	00.00%	2	$\chi 2=8.47$ p=0.05*(S)
	21 -25 years	0	0.00%	2	33.33%	4	66.67%	6	
	26 -30 years	0	0.00%	2	20.00%	8	80.00%	10	
	31 -35 years	0	0.00%	1	8.33%	11	91.67%	12	
Education	Primary education	0	0.00%	6	54.55%	5	45.45%	11	$\chi 2=9.67$ p=0.05*(S)
	Higher secondary	0	0.00%	1	9.09%	10	90.91%	11	
	Under graduation	0	0.00%	0	40.00%	5	100.00 %	5	
	Post-graduation	0	0.00%	0	0.00%	3	100.00 %	3	
Occupation	Cooly	0	0.00%	1	9.09%	10	90.91%	11	$\chi 2=3.75$ p=0.28(NS)
	Self-employment	0	0.00%	4	40.00%	6	60.00%	10	
	Private job	0	0.00%	1	16.67%	5	83.33%	6	
	Government job	0	0.00%	1	33.33%	2	66.67%	3	
	Business	0	0.00%	0	0.00%	0	0.00%	0	

Demographic Variables		Post-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Monthly income	< Rs.5000	0	0.00%	2	14.29%	12	85.71%	14	χ^2=1.22 p=0.54(NS)
	Rs.5001 - 10000	0	0.00%	3	30.00%	7	70.00%	10	
	Rs.10001 - 15000	0	0.00%	2	33.33%	4	66.67%	6	
	Rs.15001 - 20000	0	0.00%	0	0.00%	0	0.00%	0	
Type of family	Nuclear family	0	0.00%	1	5.56%	17	94.44%	18	χ^2=8.56 p=0.05*(S)
	Joint family	0	0.00%	4	44.45%	5	55.55%	9	
	Extended family	0	0.00%	2	66.67%	1	33.33%	3	
	Separated family	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	0	0.00%	6	27.27%	16	72.73%	22	χ^2=1.88 p=0.39(NS)
	Muslim	0	0.00%	1	33.33%	2	66.67%	3	
	Christian	0	0.00%	0	0.00%	5	100.00 %	5	
Habituation	Rural	0	0.00%	1	11.11%	8	88.89%	9	χ^2=7.05 p=0.03(S)
	Urban	0	0.00%	6	46.15%	7	53.85%	13	
	Semi urban	0	0.00%	0	0.00%	8	100.00 %	8	
	Hills area	0	0.00%	0	0.00%	0	0.00%	0	
Size of the family	2-3 members	0	0.00%	2	22.22%	7	77.78%	9	χ^2=3.33 p=0.18(NS)
	4-5 members	0	0.00%	5	35.71%	9	64.29%	14	
	>5 members	0	0.00%	0	0.00%	7	100.00 %	7	

Demographic Variables		Post-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Diet	Vegetarian	0	0.00%	2	33.33%	4	66.67%	6	χ^2=0.42 p=0.59(NS)
	Non vegetarian	0	0.00%	5	20.83%	19	79.17%	24	
Marriage status	Married	0	0.00%	4	19.05%	17	80.95%	21	χ^2=1.42 p=0.49(NS)
	Unmarried	0	0.00%	3	37.50%	5	62.50%	8	
	Divorced	0	0.00%	0	0.00%	0	0.00%	0	
	Separated	0	0.00%	0	0.00%	1	100.00 %	1	

p≤0.01 highly significant p>not significant NS= not significant

S=significant

Fig 17-20Above table shows the association between posttest level of Knowledge score and demographic variables among experiment group. Elder clients, more educated clients, nuclear family clients and semi urban clients are having more good knowledge score than others. It was confirmed using chi square test.

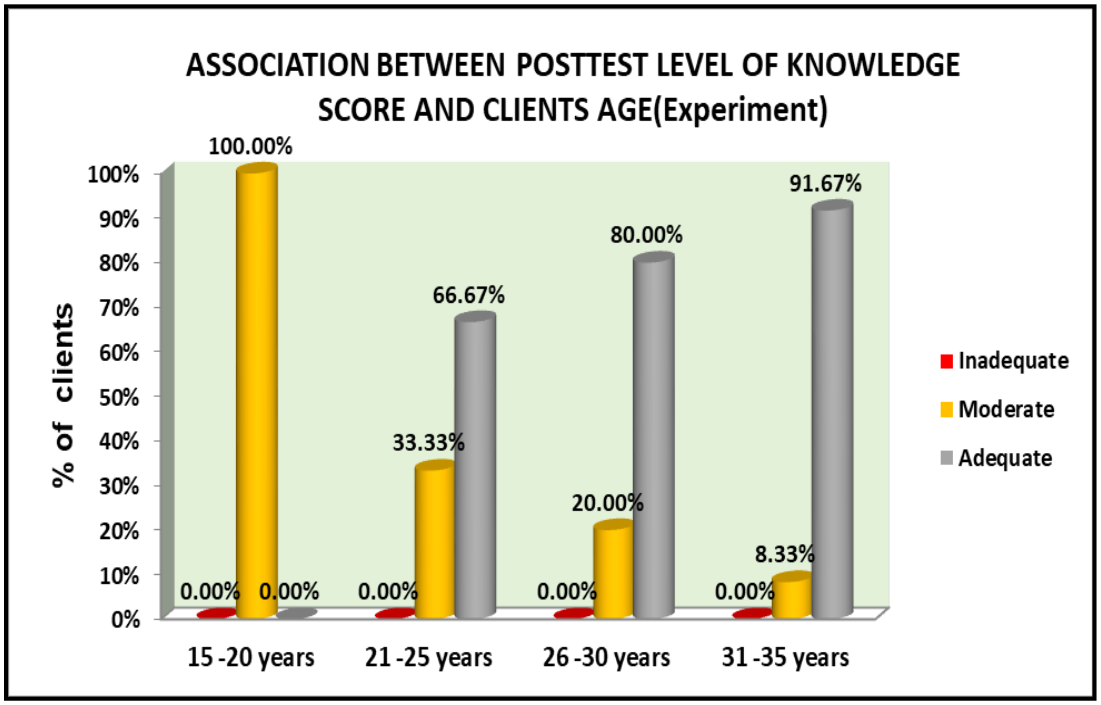
Table-20: Association Between Posttest Level Of Knowledge Score And Demographic Variables (Control)

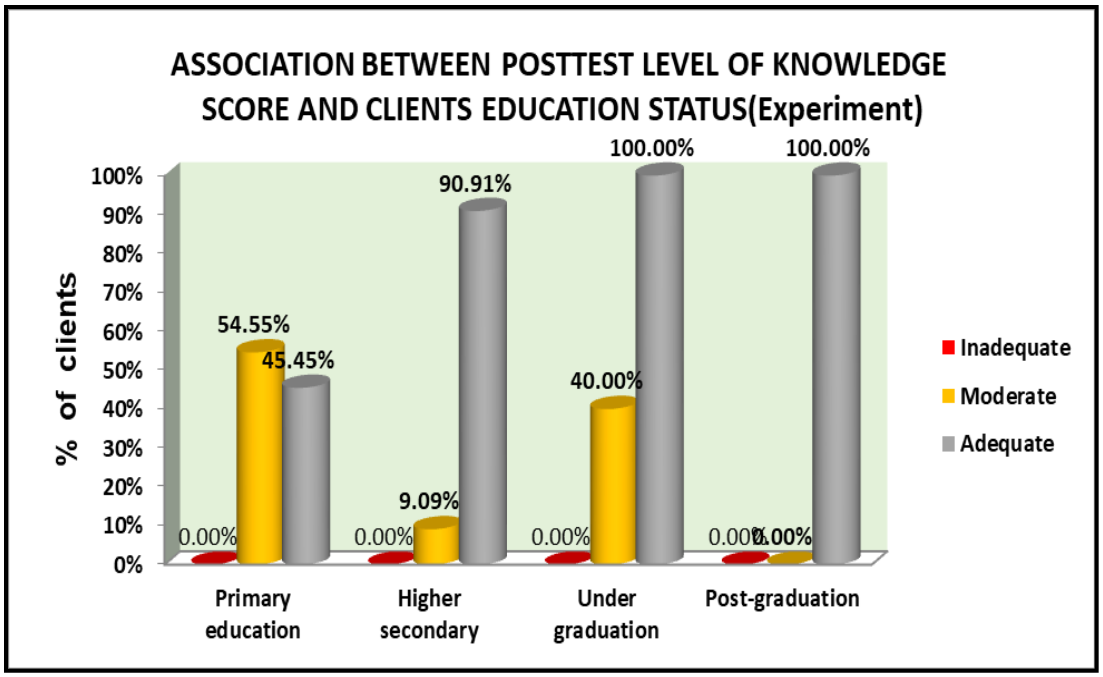
Demographic Variables		Post-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Age	15 -20 years	3	100.00%	0	0.00%	0	0.00%	3	$\chi 2=2.03$ p=0.56(NS)
	21 -25 years	4	57.14%	3	42.86%	0	0.00%	7	
	26 -30 years	6	60.00%	4	40.00%	0	0.00%	10	
	31 -35 years	7	70.00%	3	30.00%	0	0.00%	10	
Education	Non formal education	0	0.00%	0	0.00%	0	0.00%	0	$\chi 2=1.36$ p=0.72(NS)
	Primary education	9	64.29%	5	35.71%	0	0.00%	14	
	Higher secondary	6	60.00%	4	40.00%	0	0.00%	10	
	Under graduation	3	75.00%	1	25.00%	0	0.00%	4	
	Post-graduation	2	100.00%	0	0.00%	0	0.00%	2	
Occupation	Cooly	5	41.67%	7	58.33%	0	0.00%	12	$\chi 2=6.13$ p=0.11(NS)
	Self-employment	8	88.89%	1	11.11%	0	0.00%	9	
	Private job	5	83.33%	1	16.67%	0	0.00%	6	
	Government job	2	66.67%	1	33.33%	0	0.00%	3	
	Business	0	0.00%	0	0.00%	0	0.00%	0	
Monthly income	< Rs.5000	7	53.85%	6	46.15%	0	0.00%	13	$\chi 2=1.71$ p=0.41(NS)
	Rs.5001 - 10000	7	77.78%	2	22.22%	0	0.00%	9	
	Rs.10001 - 15000	6	75.00%	2	25.00%	0	0.00%	8	
	Rs.15001 - 20000	0	0.00%	0	0.00%	0	0.00%	0	

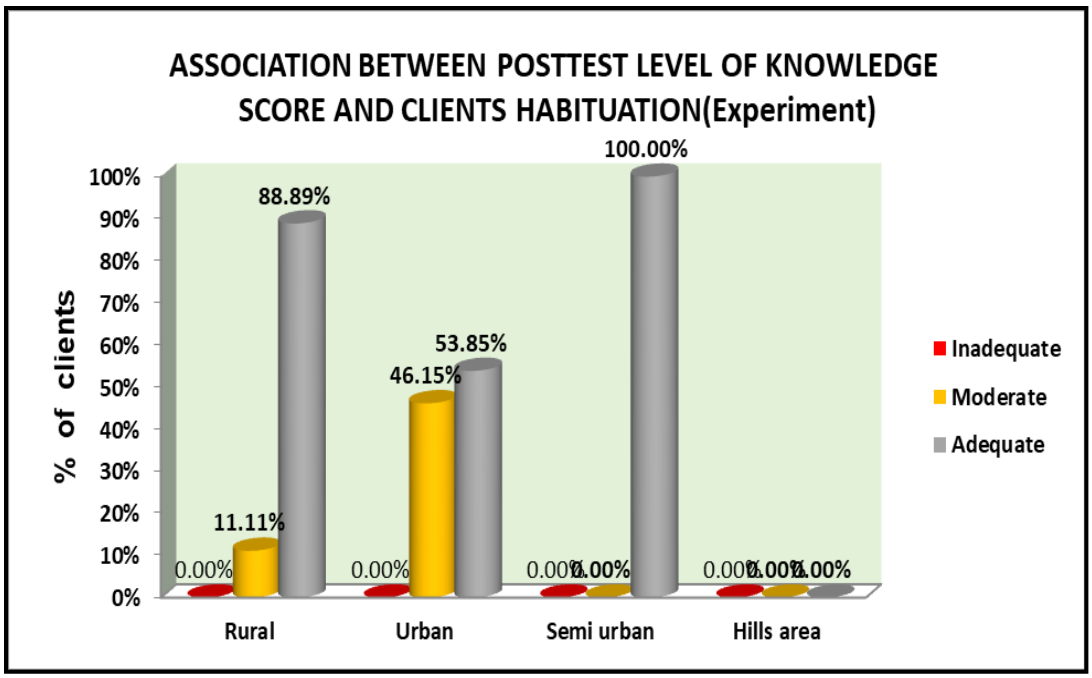
Demographic Variables		Post-test level of knowledge score						n	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Type of family	Nulear family	11	64.71%	6	35.29%	0	0.00%	17	$\chi 2=0.46$ p=0.79(NS)
	Joint family	8	72.73%	3	27.27%	0	0.00%	11	
	Extended family	1	50.00%	1	50.00%	0	0.00%	2	
	Seperated family	0	0.00%	0	0.00%	0	0.00%	0	
Religion	Hindu	15	62.50%	9	37.50%	0	0.00%	24	$\chi 2=1.31$ p=0.51(NS)
	Muslim	2	100.00%	0	0.00%	0	0.00%	2	
	Christian	3	75.00%	1	25.00%	0	0.00%	4	
Habituation	Rural	4	57.14%	3	42.86%	0	0.00%	7	$\chi 2=0.82$ p=0.66(NS)
	Urban	9	64.29%	5	35.71%	0	0.00%	14	
	Semi urban	7	77.78%	2	22.22%	0	0.00%	9	
	Hills area	0	0.00%	0	0.00%	0	0.00%	0	
Size of the family	2-3 members	6	60.00%	4	40.00%	0	0.00%	10	$\chi 2=0.60$ p=0.74(NS)
	4-5 members	10	66.67%	5	33.33%	0	0.00%	15	
	>5 members	4	80.00%	1	20.00%	0	0.00%	5	
Diet	Vegetarian	4	80.00%	1	20.00%	0	0.00%	5	$\chi 2=0.48$ p=0.49(NS)
	Non vegetarian	16	64.00%	9	36.00%	0	0.00%	25	
Marriage status	Married	15	65.22%	8	34.78%	0	0.00%	23	$\chi 2=0.52$ p=0.77(NS)
	Unmarried	4	66.67%	2	33.33%	0	0.00%	6	
	Divorced	0	0.00%	0	0.00%	0	0.00%	0	
	Separated	1	100.00%	0	0.00%	0	0.00%	1	

p>0.05 not significant NS= not significant

Above table shows the association between post-test level of Knowledge score and Demographic variables among control group. None of the variables are significant. It was confirmed using chi square test.


ASSOCIATION BETWEEN POSTTEST LEVEL OF KNOWLEDGE SCORE AND CLIENTS AGE(Experiment)
% of clients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
100.00%
0.00%
0.00%
66.67%
33.33%
0.00%
80.00%
20.00%
0.00%
91.67%
8.33%
0.00%
15 -20 years
21 -25 years
26 -30 years
31 -35 years
Inadequate
Moderate
Adequate


ASSOCIATION BETWEEN POSTTEST LEVEL OF KNOWLEDGE SCORE AND CLIENTS EDUCATION STATUS(Experiment)
% of clients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
54.55%
45.45%
0.00%
90.91%
9.09%
0.00%
100.00%
40.00%
0.00%
100.00%
0.00%
0.00%
Primary education
Higher secondary
Under graduation
Post-graduation
Inadequate
Moderate
Adequate


ASSOCIATION BETWEEN POSTTEST LEVEL OF KNOWLEDGE SCORE AND CLIENTS HABITUATION(Experiment)
% of clients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.00%
11.11%
88.89%
0.00%
46.15%
53.85%
0.00%
0.00%
100.00%
0.00%
0.00%
0.00%
Rural
Urban
Semi urban
Hills area
Inadequate
Moderate
Adequate

CHAPTER– V
DISCUSSIONS

This chapter deals with the discussion of the results of the data analysis based on the objectives of the study. The purposes of the study to assess the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine at Chennai. The objectives of the study are to assess the pre test knowledge level among clients with tuberculosis, to evaluate the impact of multimodal nursing intervention to compare the pre test and post test knowledge among clients with tuberculosis participated in the study and to associate the knowledge gain with the selected demographic variables.

The conceptual framework of the study was based on modified Panders health promotion model. Pre experimental one group pre test and post test design was used. The independent variable was multimodal nursing intervention dependent variable was knowledge of clients with tuberculosis regarding tuberculosis management.

The study period was 4 weeks from 20.01.2020 to 16.02.2020. Totally 60 clients with Tuberculosis in Govt.Thiruvatteeswarer hospital of thoracic medicine,Chennai were selected as a samples by using purposive sampling technique method. The data was collected using semi- structured questionnaire constructed by the investigator. Multimodal nursing intervention on tuberculosis management among clients with tuberculosis was implemented by using booklet and power point presentation. After the multimodal nursing intervention one week later post test level of knowledge regarding tuberculosis management by using same questionnaire. The reliability of the tool was test retest method, the data analysis and interpretation were done by using descriptive and inferential statistics.

FINDINGS BASED ON THE DEMOGRAPHIC VARIABLES

- 40.00 % were belongs to the age group of31-35years.
- 60.00% were from nuclear family.
- 30.00% of the respondents belongs to more than 2-3 members in the family.
- 36.67% of clients had completed their higher secondary school education..
- 36.67% of clients occupation were craft cooly.
- 36.67% of clients had completed secondary school education.
- 33.33% of clients occupation were self employemennt
- 66.67% were earning Rs<5000 per month as family income.
- 76.67% of the clients belongs to Hindu family.
- 66.67% were in urban area.

FINDINGS BASED ON THE OBJECTIVES

Objective-1: To assess the pre test level of multimodal nursing intervention on Tuberculosis management among clients with tuberculosis.

In the present study the pre test level of knowledge are having 50 [80.00%] of clients are having inadequate level of knowledge score, 10 [20.00%]of them are having moderate level of knowledge score and none of them are having adequate level of knowledge score regarding tuberculosis management. Statistical significance was calculated using chi square test. The result of the present study is supported by a cross sectional study done by¨

MozambiqueIn Mozambique the statistics for (2018) indicated that reported new smear positive cases were 80percent of the total population. Case notification of all forms of TB was 21 329. New pulmonary smear positive cases were 12 825, new pulmonary smear negative cases were 4 730, relapses were 888,extra pulmonary cases were 2 131.

MalawiIn 1999 the case detection was 24 396, of this number of 8 132 (33 percent) TB cases were smear positive, 10 013 (41 percent) were smear negative PTB, 5 583 (23 percent) were extra pulmonary TB.Relapse PTB was 668 (3 percent).

For the above discussion which suggest that there is a need for educational programme to improve their knowledge.

Objective-2: To evaluate the effectiveness of intervention on Tuberculosis management among clients with tuberculosis.

The present study results regarding the effectiveness of multimodal nursing intervention on tuberculosis management describes the mean difference scores. The post test knowledge of the clients after having MMI 76.67% more knowledge score than pre test score. This difference shows the impact of multimodal nursing intervention. Differences and generalization of knowledge gain score between pre test and post test score was calculated using and mean difference with 95% CI and proportion with 95% CI. The mean difference of the gain in knowledge score is 6.99

The effectiveness of multimodal nursing intervention is also proved in many studies.

The present study is supported by quantitative pre- experimental study done by ***M.S.Jyoti Sharma etal (2019)*** to assess the effectiveness make a tremendous impact on TB elimination efforts. This research is

needed to understand how behaviours, of both patients and providers affect TB-related care seeking, diagnosis, treatment success, and prevention understand how other social, cultural, and environmental influences affect health seeking and treatment outcomes related to TB. The pre test total knowledge mean score was found to be 14.47 and SD was2.90 compared to post test mean was 32.66 and SD was 4.03 knowledge scores.

Similar studies done by ***Devika Mehra, Archana Sarkar (2018)*** carried out a study to assess the TB Epidemiologic Studies Consortium (TBESC) was established to strengthen, focus, and coordinate tuberculosis (TB) research. The TBESC is designed to build the scientific research capacities of state and metropolitan TB control programs, participating laboratories, academic institutions, hospitals, and both non- and for-profit organizations.Management of tuberculosis among clients with tuberculosis. The results showed that there was a significant impact on decreasing tuberculosis at mean difference of 2.12 at Class interval 1.38 - 3.24.

Another study done by ***D. Koteswaramma (2016)*** aimed to assess the knowledge on Multidrug-resistant tuberculosis (MDR-TB) is becoming a major challenge of tuberculosis (TB) control program globally but more serious in developing countries like Ethiopia. In 2013, a survey result showed that in Ethiopia, tuberculosis patients from new cases and retreatment cases had resistance to at least isoniazid and rifampicin with a significant increase over time. Inadequate knowledge and wrong perception about MDR-TB by patients were detrimental to TB control programs. Revealed that the pre-test mean knowledge is 7.80, which has improved after imparting education and post test mean knowledge is 15.53 which is significant at P=0.001 level. The study also shows that Nursing personnel and health care provider can conduct

counselling and educational sessions at colleges to prevent teenage pregnancy.

From the above discussion it is clear that the knowledge of tuberculosis management among clients with tuberculosis can be improved through the multimodal nursing intervention with an educational module.

Objective-3: To compare the pre test and post test impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis.

The study findings describes the level of knowledge in pre-test and post test. Considering in pre-test 50 [80.00%] of them are having inadequate knowledge score, 10 [20.00%] of them are having moderate level of knowledge score and 0 [0.00%] of them are having adequate level of knowledge score. In post test, none of them are having inadequate knowledge score,16 [23.33%] of them are having moderate level of knowledge score, 44 [76.67%] of them are having adequate level of knowledge score. There is a significant difference between Pre test and post test knowledge score and hence the hypothesis (H_1) is accepted. Pre test and post test significance was calculated using extended Mc Nemar's test.

COMPARISON OF DOMAIN WISE PRE TEST AND POST TEST KNOWLEDGE SCORE

Considering **Knowledge on Tuberculosis** score, in pretest clients sare having 3.42 score and in posttest they are having 4.85 score, so the difference is 1.43. This difference is large and statistically significant difference.

Considering **Prevalence of Tuberculosis** score, in pretest clients girlsare having 1.30 score and in posttest they are having 2.22 score, so

the difference is 0.92. This difference is large and statistically significant difference.

Considering **Management of Tuberculosis** score, in pretest clients are having 1.53 score and in posttest they are having 3.08 score, so the difference is 1.55. This difference is large and statistically significant difference.

Consider Tuberculosis management score, in pretest clients sare having 1.23 score and in posttest they are having 2.90 score, so the difference is 1.67. This difference is large and statistically significant difference.

Considering **Preventive measures score,** in pretest clients sare having 0.70 score and in posttest they are having 2.12 score, so the difference is 1.42. This difference is large and statistically significant difference

Considering **Overall Knowledge Score**, in pretest clients sare having 8.18 score and in posttest they are having 15.17 score, so the difference is 6.99. This difference is large and statistically significant difference.

Statistical significance was calculated by using student's paired 't'test.

The similar studies done by ***Nice Joseph (2017)*** reported that there was a significant difference between pre and post test knowledge scores [t= 7.8 at $p<0.05$] .The mean pre-test knowledge score (18.19) was normally higher than the mean pre-test knowledge score (14.13).

The present study is supported by a similar studies **Shubha devi sapkota (2017)** the study result reveald that the pre-test knowledge and attitude was 45.5%,66.4%.Whereas in post-test 78.3%,86.0% and the

mean difference was 32.9%, 19.6%. The study also shows that there is a significant difference between the pre-test and post-test knowledge scores $p<0.05$. The discussion of the post test level of knowledge score and its comparison with the pre test knowledge proves that the teaching programme is effective to the clients to improve the knowledge regarding Tuberculosis management among clients with tuberculosis.

Objective-4: To find out the association between the post test knowledge with their selected demographic variables

The present study shows the association of knowledge with selected demographic variables considering overall knowledge score, in pretest clients are having 8.18 score and in post-test they are having 15.17 score, so the difference is 6.99. This difference is large and statistically significant. It is confirmed by using student paired t - test

Elderly age clients are gained more knowledge than the others. This is statistically significant with **x2 =6.84 p=0.04 [S]**

Nuclear family students are gained more knowledge than others. This is statistically significant with **x2 =4.65 p=0.03[S]**

Three members in the family students are gained more knowledge than others. This is statistically significant with **x2 =10.24 p=0.02[S]**

Urban area clients are gained more knowledge than others. This is statistically significant with **x2 =7.28 p=0.03[S]**

Statistical significance was calculated using chi- square test. so, the hypothesis was accepted.

Nice Joseph [2017] reported that the pre-test knowledge scores were independent of all the demographic variables except the education of the clients.The study also reveals that the BCC [Behaviour Change

Communication] helps the clients, who are living in rural or urban imparting their knowledge regarding tuberculosis management.

K.G.Santhya (2015) reported that there was a significant association between the age of samples was significantly associated with the knowledge gain at 5% level of significance which supports the present study value at x2 =6.84 p=0.04.

Yogita. P. Pandya (2015) stated that there was a significant association between the knowledge and the age of the samples, which supports the result of the present study.

The above discussion shows that the age and the place of living are associated with the knowledge gain.

From the above discussion of the present study with other similar studies justifies that there is lack of knowledge on tuberculosis management.The education planned for the clients focusing on the tuberculosis helped them to gain adequate knowledge regarding tuberculosis management.

CHAPTER–VI
SUMMARY, RECOMMENDATION AND CONCLUSION

This chapter deals with the summary, implication, Recommendation, Limitation and Conclusion.

6.1 SUMMARY OF THE STUDY FINDINGS

The study was conducted to ascertain the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Government Thiruvatteeswarer hospital of thoracic medicine at Chennai. It was a quantitative approach. The main objectives of the study is to assess the impact of multimodal nursing intervention with one group pre- test and post- test design. The study was conducted at Govt.hospital, Chennai. 60 clients with tuberculosis were included in the study based on the inclusion criteria. Self administered questionnaire was used to determine the level of knowledge among client's.The pilot study was conducted in chembiyam primary health centre.Chennai with 10 samples. No modifications were made after pilot study.

The review of literature provided the base to construct the tools to select the methodology. The conceptual framework of the study was based on the modified pendors health promotion model. Data was collected in 4 weeks from 20.01.2020 to 15.02.2020. Initially the investigator got formal permission from Government Thiruvetteeswarer hospital of thoracic medicine at Chennai. Informed written consent was obtained from each sample after explaining the purpose of the study and was given assurance for keeping the information confidentially. The data was collected by using a purposive sampling technique. The knowledge regarding tuberculosis management among clients with tuberculosis was assessed by semi- structured knowledge questionnaire.

Multimodal nursing intervention on tuberculosis management among clients with tuberculosis was given to the samples after the knowledge assessment to improve the knowledge. Data analysis was done by using descriptive and inferential statistics.

6.1.1 FINDINGS ON DEMOGRAPHIC DATA:

- Majority of clients 40.00% were belongs to the age group of 31-35years.
- Majority of clients 60.00% were from nuclear family.
- Majority of clients30.00% of the respondents belongs to more than 2-3 members in the family.
- Majority of clients 36.67% of clients had completed their higher secondary school education..
- Majority of clients 36.67% of clients occupation were cooly.
- Majority of clients 36.67% of clients had completed secondary school education.
- Majority of clients 33.33% of clients occupation were self employemennt
- Majority of clients 66.67% were earning Rs<5000 per month as family income.
- Majority of clients 76.67% of the clients belongs to Hindu family.
- Majority ofclients66.67% were in urban area.

6.1.2 Findings regarding level of knowledge prior to structured teaching programme

In assessing pre test level of knowledge 80.00% of clients are having inadequate level of score, 16.7% of them are having moderate

level and none of them are having adequate level of score. Statistical significance was calculated using chi square test.

6.1.3 Findings regarding level of knowledge after multimodal nursing intervention

In post test, none of them are having inadequate level of score, 0.00% of them are having moderate level and 23.33% are having adequate level of score

6.1.4 Findings related to effectiveness of multimodal nursing intervention

On an average, in post test after having MMI, Clients with tuberculosis are gained 34.95% knowledge score than pretest score.

Differences and generalization of knowledge gain score between pretest and pos test score was calculated using and mean difference with 95% CI and proportion with 95% CI.

6.1.5 Findings regarding association of post test knowledge with their selected demographic variables:

There was significant association with the impact of tuberculosis management among clients with tuberculosis and their age of client [x2 value =6.84 , p = 0.04*]

There was significant association with the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis and their type of family [x2 value =4.65, p = 0.03*]

There was significant association with the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis and their number of siblings in the family [x2 = 10.24, p = 0.02 *]

There was significant association with the effectiveness the impact of multimodal nursing intervention on tuberculosis management

among clients with tuberculosis and and their place of living [x2 =7.28, p =0.03*].

6.2 IMPLICATIONS

The investigator has drawn the following implications from the studies which are of vital concern in the field of nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE

- Nurses working in the community can assess the spiritual and religious factors of the clients misconception about tuberculosisand to educate them in an appropriate way.
- Clinical health nurse can motivate the clients to follow the appropriate cleanliness and their importance.
- Health education regarding tuberculosis management helps the clients to create awareness and to prevent negative impacts.

NURSING EDUCATION

- Nurse educators should teach the clients about
- To improve the knowledge of the clients and to update their knowledge regarding prevention of tuberculosis.
- Student nurses in the nursing colleges should be encouraged to conduct mass educational campaigns regarding tuberculosis management.
- Educative materials like hand- outs can be prepared by the nursing students to create awareness among clients with tuberculosis.

NURSING ADMINISTRATION

- Community health nurse can communicate with the local bodies, agencies and other leaders in ensuring the awareness of tuberculosis.
- Nursing administrators should organize In-service programme on tuberculosis to prevent the clients with tuberculosis at community level.
- Periodic workshop, conference and exhibitions can be arranged by the community health nurse at community area level in prevention of tuberculosis.
- Encourage research activities for nurses in these areas.

NURSING RESEARCH

- Promote more research activities on prevention of tuberculosis,Knowledge, attitude and practice can be assessed applying various research designs.
- The findings of the study would help to expand scientific body of professional knowledge upon which further researchers can be conducted.
- Study can be conducted in a large scale level in consideration of other contributing variables.

RECOMMENDATIONS

- The study can be repeated on the large sample for better generalization of the findings.
- An experimental study can be undertaken with control group for effective comparison.

- A similar study can be conducted among outpatient department.
- A comparative study can be conducted with rural and urban area.
- The similar study can be done to test the effectiveness of various teaching aids in imparting knowledge on tuberculosismanagement.

LIMITATIONS

- This study was basically conducted as community based study in area.
- The study was limited with fewer samples.
- Data collection is limited to four weeks

CONCLUSION

The findings revealed that the multimodal nursing intervention was more effective with the adequate knowledge gain score when compared to pretest knowledge. further studies focusing on the practice of clients with Tuberculosis regarding the Tuberculosis management among clients with Tuberculosis can be more useful. Enhanced knowledge regarding Tuberculosis management should be used in developing highly effective educational programme in areas.

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STATEMENT OF THE PROBLEM:

"A STUDY TO ASSESS THE IMPACT OF MULTIMODAL NURSING INTERVENTION ON TUBERCULOSIS MANAGEMENT AMONG CLIENTS WITH TUBERCULOSIS ATTENDING GOVERNMENT THIRUVATTEESWARER HOSPITAL OF THORACIC MEDICINE IN CHENNAI"

RESEARCH TOOL

.PART I - DEMOGRAPHIC PROFILE PROFORMA

Kindly read the questions,Tick your responses, Responses will be kept confidential

1.	AGE OF THE SAMPLE	a) 15 – 20 years b) 21 – 25 years c) 26 – 30 years d) d) 31 – 35 years
2.	EDUCATION	a) Primary education b) Higher secondary c) Under graduation d) Post graduation
3.	OCCUPATION	a) Cooley daily wages b) Self employment c) Private job d) Government job e) Business
4.	MONTHLY INCOME OF THE FAMILY	a) Less than 5000 per month b) Rrs 5001 – 10000 per month c) Rs 10001 – 15000 per month d) Rs 15001 – 20000 per month
5.	TYPE OF FAMILY	a) Nuclear family b) Joint family c) Extended family d) Separated family
6.	RELIGION	a) Hindu b) Muslim c) Christian d) Others
7.	HABITUATION	a) Rural b) Urban c) Semi urban d) Hills area
8.	SIZE OF THE FAMILY	a) 2 – 3 members b) 4 – 5 members **c)** more than 5 members

9.	MARRITAL STATUS	a)Married b)Unmarried c)Separated
10.	DIET PATTERN	a) Vegitarian b) Non-vegitarian c) Mixed

PART B – CLINICAL PROFILE

QUESTIONS TO ASSESS KNOWLEDGE

1) What is Tuberculosis

a) Bacterial infection of lungs. [ ]
b) Viral infection of lungs. [ ]
c) Fungal infection of lungs. [ ]
d) Parasite disease. [ ]

2) The appropriate cause for Tuberculosis.

a) Low immunity power. [ ]
b) Poor intake of nutritious food. [ ]
c) Mycobacterium tuberculosis. [ ]
d) Don't know [ ]

3) Organs can be affected.

a) Bone tuberculosis. [ ]
b) Lung tuberculosis. [ ]
c) Liver, kidney. [ ]
d) None. [ ]

4) National Tuberculosis Day announced on.

a) December 2. [ ]
b) May 12. [ ]
c) March 24. [ ]
d) August 15. [ ]

5) Tuberculosis is.

a) Communicable disease. [ ]
b) Non communicable disease. [ ]
c) Genetic disease. [ ]
d) None of the above. [ ]

6) Personal Protective Equipments of Tuberculosis.

a) Mask. [ ]
b) Mask, Gloves, and Glassware. [ ]
c) Gloves. [ ]
d) None of the above. [ ]

7)Tuberculosis is curable

a)Preventable [ ]

b)Curable [ ]
c)Treatable [ ]
d)Don't know [ ]

8)Tuberculosis is more likely to come

a)Passive smokers [ ]
b)Drinkers [ ]
c)polluted workers [ ]
d)Don't know [ ]

9)Tuberculosis affected by domestic animals

a)Possible [ ]
b)Impossible [ ]
c)Doubtful [ ]
d)Don't know [ ]

10)Once tuberculosis come then what is the reason for it coming back.

a)Inadequate immunity [ ]
b)Improper treatment [ ]
c)Improperly follow the safety formalities [ ]
d)Don't know [ ]

11)Death of tuberculosis

a)Yes [ ]
b)No [ ]
c)Doubtful [ ]
d)Don't know [ ]

12)It is okay to set aside from the community with tuberculosis

a)Correct [ ]
b)Wrong [ ]
c)Social taboos [ ]
d)Don't know [ ]

13)If you have depression means thats leads to tuberculosis

a)Possible [ ]
b)Impossible [ ]
c)Prevent diseases from healing [ ]
d)Don't know [ ]

14)What are the nutrients to be taken to tuberculosis

a)High protein diets [ ]

bHigh vitamin diets [ ]

c) High fibre diets [ ]

d)Don't know [ ]

CAUSES OF TUBERCULOSIS

15)The mode of transmission from person to person.

a) Personal contact. [ ]
b) Kiss and hug. [ ]
c) Cough, speak, sneeze and spit. [ ]
d) None of the above. [ ]

16) The social factor causing tuberculosis.

a) Poverty. [ ]
b) substance use [ ]
c) Lack of medical care [ ]
d) None. [ ]

17) The most common cause of tuberculosis to the child.

a) Neighborhood. [ ]
b) Conduct history. [ ]
c) Antenatal virulence. [ ]
d) None.

18)The Tuberculosis bacteria can be transmitted through

a)Sexually transmitted [ ]
b)Airborn transmitted [ ]
c)Waterborn transmitted [ ]
d)Don't know [ ]

19)Work environments at greastest risk for Tuberculosis

a)Hospitals [ ]
b)Homeless shelters [ ]
c)Residential homes [ ]
d)Don't know [ ]

CLINICAL MANIFESTATION:

20) The commonest sign of Tuberculosis.

a) Fever. [ ]
b) Cough. [ ]
c) Weight loss. [ ]
d) All the above. [ ]

21) Complications of Tuberculosis.

a) HIV. [ ]
b) Weight loss. [ ]
c) Nausea and vomiting. [ ]
d) None of the above. [ ]

DIAGNOSIS OF TUBERCULOSIS

22)Common diagnostic test for Tuberculosis.

a) Blood test and skin test. [ ]
b) Sputum test. [ ]
c) Urine test and x-ray. [ ]
d) X-ray, skin test, and sputum test. [ ]

23) Method of diagnosis for children with Tuberculosis.

a) X-ray. [ ]
b) Sputum test. [ ]
c) Mantoux test. [ ]
d) All the above. [ ]

24) Available tests for Tuberculosis.

a) Monteux. [ ]
b) Acid fast bacilli smear. [ ]
c) X-ray. [ ]
d) All the above. [ ]

PREVENTION OF TUBERCULOSIS:

25) Primary prevention of Tuberculosis.

a) Eat protein rich diet. [ ]
b) Administration of BCG vaccine. [ ]
c) Maintaining personal hygiene. [ ]
d) All of the above. [ ]

26) Tuberculosis is curable.

a) Impossible. [ ]
b) Possible. [ ]
c) Permanently curable. [ ]
d) None. [ ]

27) Can you care for yourself.

a) Take antibiotics. [ ]
b) Avoid public area such as buses, subways. [ ]
c) Follow cough etiquette. [ ]
d) All the above. [ ]

28) Universal precaution of Tuberculosis

a) Hand hygiene. [ ]
b) Cough etiquette. [ ]
c) Environmental cleaning. [ ]
d) All the above. [ ]

பகுதி - அ
(கீழே கொடுக்கப்பட்டுள்ள கேள்விகளுக்கு சரியான விடையை குறியிட்டு காட்டவும்.)

1) வயது.

அ) 15 – 20 வயது. ☐

ஆ) 21 - 25 வயது. ☐

இ) 26 - 30 வயது. ☐

ஈ) 31 – 35 வயது. ☐

2) கல்வி தகுதி.

அ) தொழில் சார்ந்த படிப்பு. ☐

ஆ) பட்டதாரி. ☐

இ) மேல்நிலை கல்வி. ☐

ஈ) உயர்நிலை கல்வி. ☐

உ) ஆரம்பக்கல்வி. ☐

ஊ) படிப்பறிவின்மை. ☐

3) தொழில்.

அ) உயர் அதிகாரி. ☐

ஆ) தொழில்னுட்பவியலார். ☐

இ) சொந்த தொழில் செய்பவர் மற்றும் விவசாயம். ☐

ஈ) கைவினை மற்றும் இயந்திர ஆப்பரேட்டர். ☐

உ) சந்தை விற்பனை தொழிலாளர். ☐

ஊ) அடிப்படை தொழிலாளர்கள். ☐

எ) வேலையில்லாதவர். ☐

4) மாத வருமானம்

அ) ரூ 2,091 ☐

ஆ) ரூ 2,092 – 6,213 ☐

இ) ரூ 6,214 – 10,356 ☐

ஈ) ரூ 10,357 – 15,555 ☐

உ) ரூ 13,536 – 20,714 ☐

ஊ) ரூ20,715 – 41,429 ☐

எ) ரூ41, 430 மேல் ☐

5) குடும்ப வகை.

அ) தனி குடும்பம். ☐

ஆ) பரந்துவிரிந்த குடும்பம். ☐

இ) பிரிந்த குடும்பம். ☐

6) மதம்.

அ) இந்து. ☐

ஆ) கிறிஸ்துவர். ☐

இ) முஸ்லிம். ☐

ஈ) மற்றமதம். ☐

7) வாழும் இடம்.

அ) கிராமப்புறம். ☐

ஆ) நகர்ப்புறம். ☐

இ) மலைவாழ். ☐

ஈ) மற்றவை. ☐

8) குடும்ப உறுப்பினர்களின் எண்ணிக்கை.

அ) 1 - 2. ☐

ஆ) 3 - 4. ☐

இ) 5 - 6. ☐

ஈ) 7 க்கு மேல். ☐

பாகம் 2

1) காசநோயின் அர்த்தம்.

பாக்டீரியா தொற்று ☐

வைரஸ் தொற்று. ☐

பூஞ்சை தொற்று. ☐

பூச்சிகளின் மூலம் பரவும் தொற்று. ☐

2) காசநோய்க்கான அடிப்படைக் காரணங்கள்.

நோய் எதிர்ப்பு சக்தி குறைவினால். ☐

ஊட்டச்சத்து குறைவாக எடுப்பதால். ☐

மைக்கோ பாக்டீரியம் என்றும் பாக்டீரியா தொற்றால். ☐

ஈ) தெரியாது. ☐

3) காச நோய் என்பது.

பரம்பரை நோயா. ☐

தொற்றுநோயா. ☐

பொதுவான நோயா. ☐

தெரியாது. ☐

4) காசநோய் எங்கெல்லாம் பாதிப்பை ஏற்படுத்தும்.

நுரையீரல். ☐

முதுகு தண்டுவடம். ☐

சிறுநீரகம். ☐

மேற்கூறிய அனைத்தும். ☐

5) காச நோய் யாருக்கு வர வாய்ப்புகள் அதிகம்.

புகை பிடிப்பவர்கள். ☐

மது அருந்துபவர்கள். ☐

காசநோய் உள்ளவர்களோடு நெருங்கிப் பழகுபவர்கள். ☐

தெரியாது. ☐

6) வீட்டு விலங்குகளால் காசநோய் பாதிப்பு ஏற்படுமா?

வாய்ப்பு இருக்கிறது. ☐

வாய்ப்பு இல்லை. ☐

ஏற்படலாம். ☐

தெரியாது. ☐

7) ஒருமுறை காசநோய் வந்தால் அது திரும்ப வருவதற்கான காரணம் என்ன?

நோய் எதிர்ப்பாற்றல் குறைந்திருந்தால். ☐

அரைகுறை சிகிச்சை. ☐

விட்டுவிட்டு மருந்தை எடுப்பது. ☐

தெரியாது. ☐

8) காச நோயால் மரணம் நிகழுமா?

ஆம். ☐

இல்லை. ☐

தெரியாது. ☐

9) காச நோயினால் சமூகத்திலிருந்து ஒதுக்கி வைப்பது சரியா.

சரி. ☐

தவறு. ☐

சமூக பிரச்சனை. ☐

தெரியாது. ☐

10) மன அழுத்தம் இருந்தால் காச நோய் வருமா?

வரும் ☐

வராது. ☐

நோய்கள் குணமாவதை தடுக்கும். ☐

தெரியாது ☐

காசநோயின் காரணிகள் பற்றி கேள்விகள்

1) காசநோய் எந்தெந்த முறையில் ஒரு மனிதனிடத்திலுருந்து மற்றொரு மனிதருக்கு பரவுகிறது.

நேரடி தொடர்பு. ☐

முத்தமிடுதல், கட்டிப்பிடித்தல். ☐

இருமல், தும்மல், பேசுதல், துப்புதல், போன்றவற்றின் மூலம். ☐

2) காசநோய்க்கான சமூக காரணம் என்ன?

வறுமை. ☐

காற்றோட்டமில்லாத நெருக்கமான வீடுகள் ☐

நூல், ஆலை, பஞ்சு, ஆலை. ☐

மேற்கூறிய அனைத்தும். ☐

காச நோயின் அறிகுறிகள் பற்றிய கேள்விகள்

1) காசநோய்க்கான சிகிசிச்சை முறை என்ன.

ரத்த பரிசோதனை. ☐

தோல் பரிசோதனை . ☐

சிறுநீர் பரிசோதனை. ☐

தெரியாது. ☐

2) காச நோய்க்கான ஆரம்ப தடுப்பு முறைகள் என்னென்ன.

புரதச் சத்து நிறைந்த உணவுகள். ☐

பிசிஜி தடுப்பூசி போடுதல். ☐

தன் சுத்தத்தை பேணுதல். ☐

மேற்கூறிய அனைத்தும். ☐

3) காச நோயில் இருந்து தானே தன்னை பாதுகாப்பது எப்படி.

ஆண்டிபயாடிக் எடுத்துக்கொள்வது. ☐

பொது இடங்களில் அலைவதை குறைத்துக்கொள்வதால். ☐

இருமல் வந்தால் வாயை துணியால் மூடிக் கொள்வதால். ☐

மேற்கூறிய அனைத்தும் . ☐

4) காசநோய்க்கு உலக அளவில் முன்னெச்சரிக்கைகள் என்ன.

- [ ] கை சுத்தம் பேணுதல்.
- [ ] இரும்பல் பாதுகாப்பு முறை.
- [ ] சுற்றுப்புறம் சுத்தம் பேணுதல்.
- [ ] மேற்கூறிய அனைத்தும்.

INTRODUCTION OF TUBERCULOSIS

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*. Tuberculosis typically attacks the lungs, but can also affect other parts of the body. The disease has become rare in high income countries, but is still a major public health problem in low- and middle-income countries.It is estimated that between the years 2000 and 2010, eight to nine million new cases emerged each year. Approximately 1.5 million people die from the disease each year. In adults, tuberculosis is the second leading cause of death due to an infectious disease (after AIDS), with 95% of deaths occurring in low-income countries. Tuberculosis is a major problem of children in poor countries where it kills over 100,000 children each year

The treatment of tuberculosis remains a constraint for patients and a heavy burden for the healthcare system. Drug-susceptible tuberculosis requires at least six months of therapy under close supervision. A treatment for multidrug-resistant tuberculosis requires nearly two years of treatment with poorly tolerated and less effective drugs. In most places the diagnosis still relies mainly on direct microscopy that is unable to detect a large proportion of patients. The BCG vaccine, developed almost a century ago, confers only partial protection.

After 40 years of minimal progress in the tools to fight tuberculosis there are some reasons for hope. A few new drugs are reaching the final phase of development; a new molecular test that can be decentralized to some extent and allows the rapid diagnosis of tuberculosis and of resistance to rifampicin has been introduced. Though this is undeniable progress, much will be needed to bring the new tools and drugs to the patients in need. Furthermore, a true "point of care" diagnostic test still does not exist and little progress has been made in research for a more effective vaccine.

Case management of patients does not necessarily have to involve a major, vertical programme. It should be incorporated into the framework of other medical activities in order to offer comprehensive and integrated treatment even if the number of patients being treated is relatively small.

This guide has been developed jointly by Médecins Sans Frontières and Partners In Health. It aims at providing useful information to the clinicians and health staff for the comprehensive management of tuberculosis. Forms of susceptible and resistant tuberculosis, tuberculosis in children, and HIV co-infection are all fully addressed.

CENTRAL OBJECTIVES:

At the end of the teaching programme the clients with tuberculosis will be able to acquire knowledge on Tuberculosis Management and develop desirable attitude & skills to practice this knowledge in various settings.

SPECIFIC OBJECTIVES:

- define the term of Tuberculosis Management
- explain the causes and mode of transmission of Tuberculosis
- list out the signs and symptoms of Tuberculosis
- enumerate the investigations of Tuberculosis
- describe the drug management of Tuberculosis
- enlist the preventive measures of the Tuberculosis
- state the do's and don'ts the Tuberculosis.

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
1.	2 min	Definition of tuberculosis	**DEFINITIONOFTUBERCULOSIS MANAGEMENT** Tuberculosis management refers to the medical treatment of the infectious disease tuberculosis. The standard" short" course treatment for TB is isoniazid ,rifampicin, pyrazinamide,ethambutol for two months, then isoniazid and rifampicin aloe for a further four months. A person may develop TB after inhaling *Mycobacterium tuberculosis* (*M. tuberculosis*) bacteria. When TB affects the lungs, the disease is the most contagious, but a person will usually only become sick after close contact with someone who has this type of TB.	Explaining and discussion	Listening and discussion	Roller board	What is Tuberculosis?
2.	2 min	Explain the causes and mode of transmission of Tuberculosis	**CAUSES AND MODE OF TRANSMISSION OF TUBERCULOSIS** Tuberculosis is caused by bacteria that spread from person to person through microscopic droplets released into the air. This can happen when someone with the untreated, active form of tuberculosis coughs, speaks, sneezes, spits, laughs or sings. Although tuberculosis is contagious, it's not easy to catch. You're much more likely to get tuberculosis from someone	Explaining and discussion	Listening and discussion	Chart	What are all the causes of Tuberculosis?

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			you live with or work with than from a stranger. Most people with active TB who've had appropriate drug treatment for at least two weeks are no longer contagious. ***Mycobacterium tuberculosis*** is the causative organism of TB. It is an obligate, pathogenic, rod-shaped and non-motile organism belonging to the family Mycobacteriaceae. It is highly resistant to adverse conditions, thus, it can remain alive in dust for several months. This resistance is mainly attributed to its unusual cell wall which is rich in lipids. As an aerobic organism, this bacterium requires oxygen to grow, and divides every 15-20 hours. **MODE OF TRANSMISSION OF TUBERCULOSIS** It's spread when a person with active TB disease in their lungs coughs or sneezes and someone else inhales the expelled droplets, which contain TB bacteria. Although TB is spread in a similar way to a cold or flu, it is not as contagious. You would have to spend prolonged periods (several hours) in close contact with an infected person to catch the infection in humans, TB is mainly contracted by droplet infection through coughing, spitting, and sneezing by patients with active tuberculosis. When such patients cough, spit, sing, speak, or sneeze, they release infectious				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			aerosol droplets of about 0.5 to 5.0 µm in diameter. Each aerosol droplet when inhaled is sufficient to cause infection as inhalation of less than 10 bacteria can initiate tuberculosis. Note: Just a single sneeze can release thousands of droplets. It can also be contacted by handling objects contaminated with the saliva or sputum of patients. This is especially relevant to people in close contact with TB patients, as they have a higher risk of contracting the disease. As a zoonotic disease, tuberculosis may also be transmitted ocassionally from animals to humans via contact with infected animals or their products. Drinking unpasteurized milk of a cow infected with Mycobacterium bovis may cause an infection.				
3.	5 min	Lists the signs and symptoms of Tuberculosis	**SIGNS AND SYMPTOMS OF TUBERCULOSIS** As said earlier, tuberculosis can infect any part of the body, but it most commonly infects the lungs, a condition referred to as pulmonary tuberculosis. The symptoms and possible signs of Tb include: • Fever • Chest pains • Persistent coughing	Explaining and Discussion	Listening and discussion	Booklet	What are all the signs and symptoms of tuberculosis?

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			• Night sweats • Spitting of blood-stained sputum • Fatigue • Loss of weight and appetite -When Tb occurs outside the lungs, the symptoms may -- vary. -The spread of Tb from the bloodstream to other parts of the body may infect the brain, liver, heart, and bones. In the brain, it can cause meningitis, while in the bones, it causes osseous tuberculosis. **Signs and symptoms of active TB include:** • Coughing that lasts three or more weeks • Coughing up blood • Chest pain, or pain with breathing or coughing • Unintentional weight loss • Fatigue • Fever • Night sweats • Chills • Loss of appetite Enhanced recording and reporting. Both developed and developing countries now have additional diagnostic information at their disposal, including sputum culture, DST and HIV test results, all of which can be used to				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			guide patient management. TB programme managers also need to monitor records and reports from public and private care providers not directly linked to the NTP. Special attention must be paid to ensuring the confidential. Use of electronic recording systems *(now available)* will be considered where appropriate. Making the best use of data at all levels will mean many countries having to train staff in the analysis and interpretation of data, as well as in the use of the computer software that can greatly facilitate this work. As electronic recording systems become more widely available, consideration should be given to storing individual patient data, which will make more detailed analyses of aggregated data possible.				
4.	5 min	Enumerate the investigations of Tuberculosis	**INVESTIGATIONS FOR TUBERCULOSIS** Anyone presenting with cough of greater than 3 weeks with sputum production should undergo investigations for diagnosis of pulmonary tuberculosis **Sputum smear:** • 3 sputum examination* optimum • 1st spot sputum on the day of presentation • Early morning sample on 2nd day • Early morning (indoor) or spot sputum (outdoor) on 3rd day	Explaning and discussion	Listening and discussion	Booklet	What are all the investigations for tuberculosis?

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			• Ziehl Nelson staining of the sputum • Requires 5,000-10,000 bacilli per mL **ADVANTAGES** • Cheap • Rapid • Easy to perform **DISADVANTAGES** • Children, Elderly and HIV infected can produce sputum • Can not differentiate between dead or alive baciili • Alternately stained with auramine-rhodamine - flouresecent stain • Sputum can be induced by hypertonic saline • Lastly Bronchoalveolar lavage can be used for the smear. • Transbronchial biopsy can also be taken for staining and culture • Gastric lavage or aspirate can also be used • Ideally early morning sample is best for the detection of AFBs.				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
5.	5 min	Describe the drug management for tuberculosis	**TUBERCULOSIS MANAGEMENT** **Chest X-ray:** • No pattern is absolutely typical of TB • 10-15% of culture positive TB patients are not diagnosed by x-ray. 40% of patients diagnosed as having TB on the basis of x-ray alone do not have active TB **PATTERNS** • Consolidation/collapse: • Pneumonia • Bronchial carcinoma • Pulmonary infarct • Cavitation: • Pneumonia/lung abscess • Lung cancer • Pulmonary infarct • Wegener's granulomatosus • Progressive massive fibrosis **DRUGS MANAGEMENT FOR TUBERCULOSIS** **Types of Tuberculosis according to drug sensitivity:** Drug Sensitive Tuberculosis: Sensitive to all 1st line drugs Monoresistant Tuberculosis: Resistant to any of the 1st line drugs Polydrug resistant Tuberculosis:	Explaining and discussion	Listening and discussion	Booklet	What is the drug management for tuberculosis?

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			Resistant to 2 or more drugs other than isoniazid and rifampicin Multidrug resistant Tuberculosis: Resistant to Rifampicin and Isoniazid Extensively resistant Tuberculosis: Resistant to Rifampicin, Isoniazid and fluoroquinolone or any of the injectables (Kanamycin, capreomycin and Amikacin) Totally resistant Tuberculosis: All known 1st and 2nd line drugs. **CATEGORY OF DRUGS:** **Category I:** New cases Extra-pulmonary Others Regimen: standard **Category II:** Retreatment cases: Failure (DST mandatory) Relapse (DST preferable) Default (DST preferable) If DST negative or unavailable (with low probability of MDR) regimen: 2 months HRZES 1 month HRZE 5 Months HRE If DST positive adjust regimen accordingly; may require MDR treatment. If sputum positive after continuation means treatment				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			failure and means MDR TB and patient becomes ineligible for Cat-II treatment **Standard Treatment:** **INDUCTION PHASE: RIPE** **Rifampicin** 10 mg/Kg per day (max 600mg) 10mg/kg oral twice a week **Isoniazid** 5 mg/kg daily oral or I/M(max 300mg) 15 mg/Kg 1-3 times a week oral or I/M(max 900mg) Add pyridoxine 25 mg\day **Pyrazinamide** 15-30 mg/Kg daily (max 2g) 50mg /Kg twice weekly (max 2g) **Ethambutol** 15mg/kg daily oral For 2 months				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			Continuation Phase: **2 drugs:** Rifampicin and Isoniazid for 4 months (6 months total)* OR Ethambutol and Isoniazid for 6 months (8 months total)+OR 3 drugs: Isoniazid, Rifampicin and Ethambutol for 4 months (6months total) *This therapy is given in those areas where the resistance to the isoniazid is high. In such cases there is a high chance of developing rifampicin resistance as well and consequently leading to Multi drug resistance. +Usually given in America and Europe where resistance to isoniazid is low Multidrug Resistance Treatment: It can be blind (based on clinical scenario) or guided (based on culture or gene testing) **PRINCIPLES** At least 20 months duration **5 Drugs:**				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			4 2nd line and pyrazinamide 1 aminoglycoside 1 fluoroquinolone Others cycloserine and ethionamide 8 months of intensive phase Aminoglycoside (e.g amikacin or kanamycin) 15-20 mg/Kg/day for 6days/weeks 1g vial Fluoroquinolone (e.g Levofloxacin, moxifloxacin) Levofloxacin 7.5-10 mg/Kg Give 500-1000 mg daily in single dose or 2 divided doses as tolerated Levofloxacin 250 and 500 mg tablets Moxifloxacin 400 mg tablets **Cycloserine:** 15-20 mg/Kg/day 250 mg capsule				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			Begin 2 tab/day and increase gradually according to patient's weight until maximum 1 g daily in 2 divided doses as tolerated. Vitamin B6 200 mg daily or 1 tab of vitamin B6 50 mg for each capsule of cycloserine given Ethionamide 15-20 mg/kg/day oral (max 1g) 250 mg Same as cycloserine Pyrazinamide 30-40 mg/Kg/day (max 2 g) 500 mg tablet 12 months of continuation phase 3 drugs are retained and 2 are withdrawn Usually pyrazinamide and aminoglycoside are discontinued Bedaquiline: Approved for use in MDR TB along in combination with four other drugs Inhibits bacterial ATP synthease WHO approves the use of drug under following conditions: Treatment is administered in closely monitored conditions				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			Proper patient selection Proper informed consent Adherence to WHO recommendations for designing MDR-TB treatment regimes Pharmocovigilance and proper management of adverse reactions and drug to drug interaction				
6.		Describe the preventive measures of the Tuberculosis	**PREVENTIVE MEASURES OF TUBERCULOSIS** TB prevention consists of several main parts. Stopping the transmission of TB from one adult to another Firstly there is a need to stop the transmission of TB from one adult to another. This is done through firstly, identifying people with active TB, and then curing them through the provision of drug treatment. With proper TB treatment someone with TB will very quickly not be infectious and so can no longer spread TB to others. If someone is not on treatment, then precautions such as cough etiquette, must be taken to prevent TB spreading from one adult to another. Anything which increases the number of people infected by each infectious person, such as ineffective treatment because of drug resistant TB, reduces the	Explaining and discussion			What are all the preventive measures of the Tuberculosis?

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			overall effect of the main TB prevention efforts. The presence of TB and HIV infection together also increases the number of people infected by each infectious person. As a result it is then more likely that globally the number of people developing active TB will increase rather than decrease. **TB PRECAUTIONS,COUGH ETIQUETTES** TB is caused when a person breathes in TB bacteria that are in the air. So it is important that people with TB, who are not on effective treatment, do not release TB bacteria into the air when they cough. Cough etiquette means that if you have TB, or you might have TB, then when you cough you should cover your mouth and nose with a tissue. You should put your used tissue in a bin. If you don't have a tissue then you should cough or sneeze into your upper sleeve or elbow. You should not cough into your hands. After you have coughed you should wash your hands. **TB PREVENTION-THE BCG VACCINE** The vaccine called Bacillus Calmette-Guerin (BCG) was first developed in the 1920s. It is one of the most widely used of all current vaccines, and it reaches more than 80% of all new born children and infants in countries where it is part of the national childhood immunization programme.2 However, it is also one of				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			the most variable vaccines in routine use. The BCG vaccine has been shown to provide children with excellent protection against the disseminated forms of TB. However protection against pulmonary TB in adults is variable. Since most transmission originates from adult cases of pulmonary TB, the BCG vaccine is generally used to protect children, rather than to interrupt transmission among adults. **TB EDUCATION** TB education is necessary for people with TB. People with TB need to know how to take their TB drugs properly. They also need to know how to make sure that they do not pass TB on to other people. But TB education is also necessary for the general public. The public needs to know basic information about TB for a number of reasons including reducing the stigma still associated with TB. **TB TREATMENT AS TB PREVENTION** TB drug treatment for the prevention of TB, also known as chemoprophylaxis, can reduce the risk of a first episode of active TB occurring in people with latent TB. The treatment of latent TB is being used as a tool to try and eliminate TB in the United States.				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
7.		State the do's and don'ts the tuberculosis	**DO'S AND DON'TS THE TUBERCULOSIS** 1. Cover your mouth with a hanky (piece of cloth) while coughing. Wash and put this hanky in boiling water for 10 minutes daily before reuse. 2. Spit only in a cup or a can and keep its lid closed. After 2-3 days pour kerosene oil, burn and bury it. Then take a fresh can. Don't spit here and there. 3. Or spit on small pieces of old newspaper and fold and collect them carefully in a corner; light a matchstick and burn them every evening. 4. Give a good sputum sample for testing. Cough deeply, forcefully and repeatedly to bring out your phlegm; keep collecting the sputum for 2 hours and then hand over the cup with your name written on it to the laboratory. 5. Take your medicines regularly and religiously as directed. 6. Be an out door person. Spend most of your time out in the open – in a field, park, courtyard or roof. Don't stay in closed, unventilated, crowded and congested rooms. 7. Eat a healthy balanced diet that includes milk, green vegetables, pulses (deals), cheese, meat, eggs and fruits etc. Don't waste money on non-seasonal	Explaining and discussion			

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			costly fruits, which hardly provide any added advantage. 8. Maintain your temperature chart; use thermometer twice a day and jot down the readings and prepare this chart. 9. Maintain your bi-weekly weight chart. **DON'TS** 1. Don't give up treatment midway. TB treatment must always be taken for a minimum of 6 – 8 months. Incomplete treatment is a blunder. 60% patients discontinue medication as soon as symptoms subside and they begin to feel better. They are bound to suffer. 2. No self-medication please. 3. Don't accept treatment from quacks. Consult only a qualified doctor (with at least an MBBS degree) 4. Don't ever miss even a single dose. 5. Don't leave behind even one tablet out of your quota of dose; swallow each and every pill religiously. 6. Don't accept substandard medicines. Take drugs manufactured only by well-known firms of international repute – reconfirm this diligently with				

S. No	Time	Specific Objective	Content	Researcher' Activity	Learners Activity	AV Aids	Evaluation
			your chemist and doctor. 7. Don't forget to check the date of expiry of medicines. 8. Don't change doctors and drug-regimes frequently and recklessly. 9. No smoking, drinking alcohol, tobacco-chewing or drug addictions please. 10. Don't hesitate in giving your sputum samples repetitively, to record your weight every month or to seek a second opinion, if required. 11. As long as you are still sputum positive, don't pick up infants and small kids or kiss them. Don't sleep with them or in the same room. Simply stay away from kids.				

SUMMARY

Tuberculosis management is important to remember that effectively managing the Tuberculosis management requires a lifelong focus which is aided by learning as much as possible about the condition. It is essential to understand the long term health risks associated with tuberculosis management and to take prevents steps to reduce risk.

செவிலியர் கல்லூரி,
சென்னை மருத்துவக் கல்லூரி, சென்னை-600 003.

காசநோய் பற்றிய பாடக் கட்டுரை

கல்வி நிறுவனம்	:	செவிலியர் கல்லூரி, சென்னை மருத்துவக் கல்லூரி, சென்னை-600 003.
தலைப்பு	:	காசோநோய் பற்றிய பராமரிப்பு
குழு	:	காசநோயாளிகள்
இடம்	:	அரசு திருவொற்றியூர் நெஞ்சக மருத்துவமனை, சென்னை
கற்பித்தல் வகைகள்	:	புத்தக கையேடு மற்றும் அறிவிப்பு நோட்டீஸ்

மத்திய நோக்கம்

இந்த கற்பித்தலின் முடிவில் காசநோயாளிகளஇன் பகுத்தறிவு அதிகரிப்பதுதான். இந்த காசநோய் பராமரிப்பு பாடக் கட்டுரையின் முக்கிய குறிக்கோள் ஆகும்.

துணை நோக்கங்கள்

இந்த காசநோய் பற்றிய பாடக் கட்டுரையின் முடிவில் நோயாளிகள் தெளிவு பெறுவது,

- காசநோய் என்றால் என்ன
- காசநோய்ககான காரணிகள் மற்றும் பரவும் முறைகளை வகைப்படுக
- காசநோயின் அறிகுறிகளை பட்டியலிடுக
- காசநோய்ககான சிகிச்சை முறைகள் என்னென்ன
- காசநோய்க்கான மருத்துவ முறைகள் யாவை
- காசநோயின் தடுப்பு முறைகள் யாது
- காசநோயில் செய்வது என்னென்ன? செய்யக்கூடாதது என்னென்ன?

முன்னுரை

என்புருக்கி நோய் அல்லது காசநோய் என்பது மைக்கோபாக்டீரியம் டியூபர்குளோஸிஸ் என்றும் நுண்கோலுரியின் தாக்குதலால் மாந்தர்களுக்கு ஏற்படும் கடும் நோய் தொற்றாகும். இதனால் நோயுள்ளவர் இறக்கவும் நேரிடுகிறது. மேலும் இந்நோயானது நுரையீரல், எலும்பு, மூளை போன்ற உடலின் பல பாகங்களிலும் ஏற்படுகிறது. காசநோய் ஒரு முக்கிய தொற்று நோயாக இவ்வுலகில் பரவுகிறது. இதனால் ஒரு வருடத்திற்கு 1,00,000 குழந்தைகள் இறக்க நேரிடுகிறது.

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
1.		காசநோய் என்றால் என்ன	**காசநோய்** காசநோய் என்பது ஆங்கிலத்தில் Tuberculosis (TB) என அழைக்கப்படுகிறது. காசநோய் மைக்ரோ பாக்டீரியம் டியுபர் குளோசிஸ் என்ற கிருமியினால் தொற்றக்கூடிய நோயாகும். இது ஏழை, பணக்காரன், ஆண், பெண், குழந்தைகள் என்ற அனைத்து வயதினரையும் தாக்கக்கூடிய ஒரு நோயாகும். காசநோய் உடலின் எந்த ஒரு பாகத்தையும் தாக்கலாம். தண்டுவடத்தை தாக்குகிறது. பெரும்பாலானவர்களிடம் காசநோய் கிருமி உடலில் இருந்தாலும் அது நோயாக மாறுவதில்லை. எச்.ஐ.வி. உள்ளவர்களுக்கு காசநோய் தொற்றக்கூடிய வாய்ப்பு மிக அதிகமாகும்.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
2.		காசநோய்ககான காரணிகள் மற்றும் பரவும் முறைகளை வகைப்படுக	**காரணிகள் மற்றும் நோய் பரவும் முறை** இது மைக்ரோபாக்டீரியம் டியூபர் குளோஸிஸ் எனப்படும் பாக்டீரியாவால் தோற்றுவிக்கப்படுகிறது. காசநோய் கண்ட நபரிலிருந்து காற்றின் மூலம் இந்நோய் மற்ற நபர்களுக்கும் பரவுகிறது. இந்நோய் கண்ட நபர் மூலம் ஒரு வருடத்தில் 10 அல்லது அதற்றகு மேற்பட் நபருக்கு இந்நோய் தொற்றும். **நோய் பரவும் முறை** முதன்மை நோய்த்தொற்றின் போது, இந்நோய் பரப்பும் பாக்டீரியா இரத்தம் மற்றும் நிணநீர் மண்டலம் மூலம் நுரையீரல் அல்லாத மற்ற பகுதிகளுக்கு பரவுகிறது. நோய் தொற்று கண்ட நபரின் உடலில், நோய் எதிர்ப்பு சக்தி போதுமானதாக இருப்பின், இந்நோய்க்கிருமிகள் அழிக்கப்படுகின்றன. நோய்த்தொற்று கண்ட நபரின் உடலில், நோய்				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
			எதிர்ப்பு திறன் குறைபாடு இருப்பின், இவ்வகை பாக்டீரியாக்கள் குறிப்பிட்ட பகுதிகளில் தங்கிவிடுகின்றன. இந்நோயினை தோற்றுவிப்பதற்கு முன்பு, சில மாதங்கள் முதல் வருடங்கள் வரை, தங்கள் இனப்பெருக்கத்தினை பாக்டீரியாக்கள் செய்து கொள்கின்றன. இருமல் மூலம், நுரையீரலில் உள்ள பாக்டீரியாக்கள் சளி வழியாக வெளிவரும். அப்படி வரும் சளியினை விழுங்கும்போது, கழுத்துப் பகுதியில் உள்ள நிணநீர் பகுதிகளுக்குள் பாக்டீரியா செல்கின்றன. நோய் தொற்று கண்ட விலங்களின் பாலில் உள்ள மைக்ரோபாக்டீரியம் போவிஸ் எனும் நோய் கிருமிகளால் பாலின் மூலம் இந்நோய் மனிதர்களுக்கு பரவுகிறது.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
3.		காசநோயின் அறிகுறிகளை பட்டியலிடுக	**காசநோயின் அறிகுறிகள்** • விட்டுவிட்டு காய்ச்சல் • மூன்று வாரம் அல்லது அதற்கும் அதிகமான வாரங்கள் இடைவிடாத இருமல் • சுவாசிப்பதில் பிரச்சனை காசநோயின் குறிப்பான அறிகுறிகள், மூன்று வாரத்திற்கு மேல் தொடரும் இருமல், சளியுடன் கூடிய இருமல், காய்ச்சல், எடை குறைவு அல்லது பசியின்மை போன்றவை ஆகும். மேற்கூறிய ஏதாவது அறிகுறி ஒருவருக்கு மூன்று வாரத்திற்கு மேல் நீடித்தால் அவர் அருகிலிருக்கும் டாட்ஸ் காசநோய் மையம் அல்லது சுகாதார மையத்திற்கு சென்று சளியை பரிசோதித்துக் கொள்ள வேண்டும்.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
4.		காசநோய்ககான சிகிச்சை முறைகள் என்னென்ன	**காசநோய்ககான சிகிச்சை முறைகள்** • சளி பரிசோதனை • மார்பக எக்ஸ்ரே பரிசோதனை • மாண்டோ (Montoux) பரிசோதனை மேற்கூறிய பரிசோதனைகள் அனைத்தும் அரசு காசநோய் தடுப்பு சிகிச்சை மையங்கள் மற்றும் அரசு ஆரம்ப சுகாதார மையங்கள் மற்றும் தாலுக்கா மருத்துவமனைகளில் உள்ளன. சளி நுண்ணோக்கி (Sputum Microscope) பரிசோதனை திருத்தப்பட்ட தேசிய காசநோய் கட்டுப்பாட்டு திட்ட (RNTCP) மையங்களில் செயல்படுகிறது. மைக்ரோஸ்கோபிக் மையங்கள் அனைத்து மாவட்டங்களிலும் செயல்படுத்தப்படுகிறது. ஒவ்வொரு மாவட்டத்திலும் ஒரு இலட்சம் பேருக்கு ஒரு மையம் என்ற விகிதத்தில் அமைக்கப்பட்டு செயல்படுகிறது. ஒவ்வொரு மையத்திலும் சளி (Sputum) பரிசோதனை செய்வதற்கு பயிற்சி பெற்ற ஆய்வக நுட்பநர் உள்ளார்.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
5.		காசநோய்க்கான மருத்துவ முறைகள் யாவை	**காசநோய்க்கான மருத்துவ முறைகள்** காசநோய் எதிர்ப்பு மருந்துகளை தொடர்ந்து முழு சிகிச்சை காலத்திற்கு எடுத்துக்கொண்டால் இந்த நோய் முழுமையாக குணமடையக்கூடியது. காசநோயால் பாதிக்கப்பட்ட நோயாளி, குறைந்தபட்சம் ஆறு மாதங்களுக்கு தொடர்ச்சியாக மருந்து எடுத்துக்கொள்ள வேண்டும். சில நோயாளிகளுக்கு மருந்துகளை ஒரு வருடத்திற்கு கூட தொடர வேண்டிய நிலை வரலாம். முக்கியமாக மருத்துவரின் ஆலோசனைப்படி தான் மருந்துகளை நிறுத்த வேண்டும. முழுமையான அல்லது தொடர்ச்சியான சிகிச்சை எடுத்துக்கொள்ளாத நோயாளிகளுக்கு இந்த நோய் உயிருக்கு ஆபத்தானதாகவோ அல்லது குணப்படுத்த முடியாததாகவோ மாறிவிடும். தேவையான காலங்களுக்கு, முறையாகவும் மற்றும் தொடர்ச்சியாகவும் சிகிச்சையை எடுத்துக்கொண்டால் இந்த நோய்				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
			முழுமையாக குணமடையக்கூடியதே. காசநோய் கிருமிகளை முற்றிலுமாக கட்டுப்படுத்த பல்வேறு வகையான நுண்ணுயிர்க் கொல்லி/ கட்டுப்படுத்தும் மருந்துகள் தேவைப்படுகிறது. காசநோய் கிருமிகள் படிப்படியாகத்தான் அழிக்கப்படுகிறது. எனவே குறிப்பிட்ட காலம் வரையிலும் கொடுக்கப்படும் மருந்துகளை உட்கொள்வது மிகவும் அவசியமாகும். மருந்து உட்கொண்ட சில வாரங்களில் உடல் நன்றாக குணமடைய தொடங்கும். அப்பொழுது இடையில் மருத்துவ சிகிச்சையை நிறுத்துவதால் உடலிலுள்ள காசநோய்க் கிருமிகள் முற்றிலும் அழிக்கப்படுவதில்லை. ஆகவே, மருத்துவ சிகிச்சை முழுமையாக மேற்கொள்வது மிகவும் அவசியம். எனவே நோயாளி தொடர்ந்து மருத்துவ சிகிச்சை முறை தற்பொழுது நடைமுறையில் உள்ளது. இது ஆங்கில டாட்ஸ் (DOTS) என்று அழைக்கப்படுகிறது. இந்த DOTS மருத்துவ சிகிச்சை அரசு மருத்துவமனைகளில் இலவசமாக வழங்கப்படுகிறது.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
6.		காசநோயின் தடுப்பு முறைகள் யாது	**காசநோயின் தடுப்பு முறைகள்** காசநோயாளி வாயை மூடாமல் இருமினாலோ அல்லது தும்மினாலோ, அல்லது அங்கங்கு துப்பினாலோ, அவர்களின் எச்சில் மூலம் காசநோய் பரவுகிறது. அதனால் நோயாளிகள் இருமும்பொழுதும் அல்லது தும்மும்போதும் எப்போதும் முகத்தை மூடிக்கொள்ள வேண்டும். நோயாளிகள் அங்கங்கு துப்பக்கூடாது மற்றும் இருமும்போது கைக்குள் ஸ்பிடூன் வைத்துக்கொள்ள வேண்டும். வீட்டிலும் நோயாளிகள் மூடி உள்ள தொட்டியில் தான் துப்ப வேண்டும். காசநோய் அறிகுறிகள் ஒருவருக்கு தோன்றினால், அதை கண்டு பயப்படாமல் இருப்பதும், நோயை மறைக்காமல் இருப்பதும் மிக முக்கியம். குறிப்பிட்ட நபர் தன்னை பரிசோதித்து கொள்வதும் தேவையான ஓய்வு எடுத்துக்கொள்வதும் அவசியம்.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
7.		காசநோயில் செய்வது என்னென்ன? செய்யக்கூடாதது என்னென்ன?	**காசநோய் ஸிசெய்ய வேண்டியதும் மற்றும் செய்யக் கூடாததும் யாவை?** **<u>செய்ய வேண்டியது</u>** • மூன்று வாரங்களோ அல்லது அதற்கு மேலும் தொடர்ந்து இருமல் இருந்தால் சளி பரிசோதனை செய்ய வேண்டும். இந்த பரிசோதனை இலவசமாக அரசு சளி நுண்ணுயிர் மையத்தில் செய்யப்படும். • அனைத்து மருந்துகளையும் தொடர்ந்து முழுகால அளவுக்கு எடுக்க வேண்டும். • பி. குணப்படுத்தக்கூடியது என்பதை புரிந்துகொள்ளவும். • தும்மல் மற்றும் இருமல் ஏற்படும் பொழுது கைக்குட்டையை உபயோகப்படுத்தவும். **<u>செய்யக்கூடாதவை</u>** • மூன்று வாரங்களோ அல்லது அதற்கு மேலும் தொடர்ந்து இருமல் இருந்தால் மருத்துவ உதவியை தவிர்க்கக் கூடாது.				

வ. எண்	நேரம்	குறிப்பிட்ட நோக்கங்கள்	பொருளடக்கம்	ஆய்வாளர் செயல்பாடு	ஒலி, ஒளி காட்சி சாதனங்கள்	கற்பவரின் செயல்பாடு	மதிப்பீடு
			• பி.–யை கண்டுபிடிக்க எக்ஸ்ரேயை மட்டும் சார்ந்து இருக்கக் கூடாது. • மருத்துவர் அனுமதியில்லாமல் மருந்துகளை நிறுத்தக் கூடாது. • கண்ட இடங்களில் எச்சில் துப்பக்கூடாது.				

சுருக்குகவுரை

மக்களிடையே காசநோய் பற்றிய விழிப்புணர்வை ஏற்படுத்துமுகமாக ஒவ்வொரு ஆண்டும் மார்ச் 24 அன்று அனுசரிக்கப்பட்டு வருகிறது. 2012 ஆம் ஆண்டில் 86 மில்லியன் மக்கள் காசநோயால் பாதிக்கப்பட்டனர். 1.3 மில்லியன் மக்கள் இந்நோயால் இறந்தனர். இவாகளில் பெரும்பாலானோர் குறைந்த அல்லது நடுத்தர வருமானம் கொண்ட நாடுகளை சேர்ந்தோர் ஆவர்.

இந்த சுருககவுறையில் காசநோயின் முன்னுரை,காசநோய் என்றால் என்ன. காசநோயின் பாதிப்புகள்,காசநோயின் விளைவுகள், முன்னெச்சரிக்கை நடவடிக்கைகள் மற்றும் காசநோய் தடுப்புமுறைகளை பார்த்தோம்.

INFORMED CONSENT

Investigator : Mrs. K. Sajitha Parveen

Name of Participant :

Age/sex :

Date :

Name of the Institution: College of Nursing, Chennai.

Title : "A study to assess the impact of multimodal nursing intervention on tuberculosis management among clients with tuberculosis attending Otteri Tuberculosis Hospital at Chennai."

Documentation of the informed consent: (legal representative can sign if the participant is minor or competent).

- I _____have read/it has been read for me, the information in this form. I was free to ask any questions and they have been answered. I am an adult and exercising my free power of choice, hereby give my consent to be included as a participant in the study.
- I have read and understood this consent form and the information provided to me.
- I have had the consent document explained in detail to me.
- I have been explained about the nature of my study.
- My rights and responsibilities have been explained to me by the investigator.
- I agree to cooperate with the investigator
- I have not participated in any research study at any time.
- I am aware of the fact that I can opt out of the study at any time without having to give any reason
- I hereby give permission to the investigators to release the information obtained from me as a result of participation in this study to the regulatory authorities, government agencies and Institutional Ethics Committee. I understand that they are publicly presented.
- My identity will be kept confidential if my data are publicly presented.
- I am aware that I have any question during this study; I should contact the concerned investigator.

Signature of Investigator Signature of Participants

Date

சுய ஒப்புதல் படிவம்

ஆராய்ச்சி தலைப்பு : சென்னையில் உள்ள ஓட்டேரி காசநோய் மருத்துவமனைக்கு வரும் காசநோயாளிகளுக்கான காச நோய் மேலாண்மை பற்றிய பன்னோக்கு செவிலிய உத்திகளின் தாக்கம் பற்றிய ஆய்வு தகவல்.

ஆய்வாளர் பெயர் : கா சாஜிதா பர்வீன்

பங்கேற்பாளர் பெயர் :

தேதி :

வயது/பால் :

- ஆய்வாளர்கள் மேற்கொள்ளும் ஆராய்ச்சியில் பங்கேற்க யாருடைய கட்டாயமுமின்றி முழு மனதுடனும் சுயநினைவுடன் சம்மதிக்கிறேன்.
- ஆய்வாளர் மேற்கொள்ளப்போகும் பரிசோதனைகளை மிக தெளிவாக விளக்கிக்கூறினார்..
- எனக்கு விருப்பம்மில்லாத பட்சத்தில் ஆராய்ச்சியிலிருந்து எந்நேரமும் விலகலாம் என்பதையும் ஆய்வாளர் மூலம் அறிந்து கொண்டேன்.
- இந்த ஆராய்ச்சி ஒப்புதல் கடிதத்தில் உள்ள விவரங்களை நன்கு புரிந்து கொண்டேன். எனது உரிமைகள் மற்றும் கடமைகள் ஆராய்ச்சியாளர் மூலம் விளக்கப் பட்டது.
- நான் ஆராய்ச்சியாளருடன் ஒத்துழைக்க சம்மதிக்கிறேன் எனக்கு ஏதேனும் உடல்நலகுறைவு ஏற்பட்டால் ஆராய்ச்சியாளர் இடம் தெரிவிப்பேன்.
- நான் வேறு எந்த ஆராய்ச்சியிலும் தற்சமயம் இடம்பெறவில்லை என்பதை தெரிவித்துக் கொள்கிறேன்.
- இந்த ஆராய்ச்சியின் தகவல்களை வெளியிட சம்மதிக்கிறேன். அப்படி வெளியிடும் போது என் அடையாளம் வெளிவராது என்பதை அறிவேன்.
- எனக்கு இந்த ஒப்புதல் கடிதத்தின் நகல் கொடுக்கப்பட்டது.

ஆய்வாளர் கையொப்பம் பங்கேற்பாளர் கையொப்பம்

தேதி : தேதி :

ஆராய்ச்சி தகவல் தாள்

ஆராய்ச்சி தலைப்பு: சென்னையில் உள்ள ஓட்டேரி காசநோய் மருத்துவமனைக்கு வரும் காசநோயாளிகளுக்கான காச நோய் மேலாண்மை பற்றிய பன்னோக்கு செவிலிய உத்திகளின் தாக்கம் பற்றிய ஆய்வு தகவல்.

ஆய்வாளர் பெயர் : கா சாஜிதா பர்வீன் தேதி :

பங்கேற்பாளர் பெயர் :

வயது/பால் :

- ஆய்வாளர் மேற்கொள்ளும் ஆராய்ச்சியில் பங்கேற்க யாருடைய கட்டாயமுமின்றி முழுமனதுடன் சம்மதிக்கலாம்.
- இதில் பங்கேற்பதன் நோக்கம்: மாணவர்கள் ஆரோக்கியமாக வாழ்வதற்குரிய தகவல்களை தெரிந்து கொள்வதற்காகவும் அதனை பயன்படுத்துவதற்காக மட்டும் தான்.
- இந்த ஆராய்ச்சியின் நோக்கம்: காச நோயாளிகளுக்கான காச நோய் மேலாண்மை பற்றிய பன்னோக்கு செவிலிய உத்திகளின் தாக்கம் பற்றிய ஆய்வு.
- ஆராய்ச்சி மேற்கொள்ளும் முறை: இந்த ஆராய்ச்சி காச நோயாளிகளுக்கான காச நோய் மேலாண்மை பற்றிய பன்னோக்கு செவிலியர்களின் தாக்கம் பற்றிய கற்றுத்தந்தவன் தாக்கத்தை அறியலாம்.
- இதனால் ஆய்வாளருக்கான பயன்: இந்த ஆய்விற்கு பின் காசு நோயாளிகளுக்கான காச நோய் மேலாண்மை பற்றிய பன்னோக்கு செவிலிய தாக்கம் பற்றி கற்றுத் தந்த தன் தாக்கத்தை அறியலாம்.
- இதனால் பங்கேற்பாளருக்கான பயன்: இந்த ஆய்விற்கு பின் காசநோயாளிகளுக்கு பன்னோக்கு செவிலிய உத்திகளையும் தாக்கத்தினால் காச நோயில் இருந்து அவர்கள் மேலாண்மை அடைவது அதிகரிக்கிறது.
- ஆராய்ச்சியில் பங்கேற்கவில்லை என்றாலும் உங்களின் சராசரி வாழ்க்கை முறையில் எந்தவித மாற்றமும் ஏற்படாது என்பதை தெரிவிக்கின்றேன்.

- இந்த ஆராய்ச்சியில் பங்கேற்க விருப்பம் இல்லை என்றால் உங்களின் முழு மனதுடன் நீங்கள் இந்த ஆராய்ச்சியில் இருந்து விலகிக் கொள்ளலாம் என்பதை தெரிவிக்கின்றேன்.
- இந்த ஆராய்ச்சியில் உங்களின் தகவல்களை பாதுகாப்பாக வைத்து கொள்கிறேன் என்பதை தெரிவிக்கின்றேன்.
- இந்த ஆராய்ச்சியின் தகவல்களை வெளியிடும் போது உங்களை பற்றி அடையாளங்கள் வெளிவராது என்று உறுதி கூறுகிறேன்.

ஆய்வாளர் கையொப்பம் பங்கேற்பாளர் கையொப்பம்

தேதி : தேதி :

CERTIFICATE FOR TAMIL EDITING

This is to certify that the dissertation work topic titled, " **A study to assess the impact of multi modal intervention on Tuberculosis management among clients with Tuberculosis attending Government Thiruvatteeswarar hospital of thoracic medicine**", done by S.Sajitha Parveen, M.Sc(N) II year student, College of Nursing, Madras Medical College, Chennai-03 has been edited and validated for Tamil language appropriateness.

Place :

Date :

Signature :

Name : எம். சரசு, எம்.ஏ..எம்.எட்.,
முதுகலை பட்டதாரி ஆசிரியை (தமிழ்)
அரசினர் மேல்நிலைப் பள்ளி,
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Designation:

Place :

CERTIFICATE FOR ENGLISH EDITING

This is to certify that the dissertation work topic titled, "**A study to assess the impact of multi modal intervention on Tuberculosis management among clients with Tuberculosis attending Government Thiruvatteeswarar hospital of thoracic medicine**", done by S.Sajitha Parveen, M.Sc(N) II year student, College of Nursing, Madras Medical College, Chennai-03 has been edited and validated for English language appropriateness.

Place :

Date :

Signature : T. Jothilakshmi

T. JOTHILAKSHMI, M.A.,B.Ed.,
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Name :

Designation :

Place :

From,

Mrs.S.Sajitha Parveen,
M.sc(N) 1Year,
College of Nursing,
Madras medical college,
Chennai-03.

TO,

The Director,
Government Thiruvatteeswarar Hospital of Thoracic Medicine,
Konnur High Road, Otteri,
Ayanavaram, Chennai-600023.

Through

The Principal,
College of Nursing,
Madras Medical College,
Chennai-03.

Respected sir,

Sub: **College of Nursing, Madras Medical College, Chennai-03. M.sc (N) I Year student Dissertation –permission to conduct studying- Reg.**

*****

I request you to kindly permit me to conduct dissertation on "A STUDY TO ASSESS THE IMPACT OF MULTIMODAL NURSING INTERVENTION O TUBERCULOSIS MANAGEMENT AMONG CLIENTS WITH TUBERCULOSIS ATTENDING GOVERNMENT THIRUVATTEESWARAR HOSPITAL OF THORACIC MEDICINE AT CHENNAI".

Thanking You

Your's Faithfully,

S. Sajitha Parveen.

(S.SAJITHA PARVEEN)

Place: Chennai

Date:

Forwarded

PRINCIPAL
COLLEGE OF NURSING
MADRAS MEDICAL COLLEGE
CHENNAI - 600 003.

CERTIFICATE OF CONTENT VALIDITY

This is certify that the tool submitted by S.Sajitha Parveen M.sc Nursing II year student, college of Nursing, Madras Medical college which is to be used in her study titled **"A Study to Assess The Impact of Multimodal Nursing Intervention on Tuberculosis Management among Clients with Tuberculosis attending Govt. Thiruvatteeswarar Hospital of Thoracic Medicine at Chennai"** has been validated by the undersigned. The suggestion and modifications given by me will be incorporated by the investigator in concern with their respective guide. The she can proceed to do the research.

Signature with seal

Name: Bareemathi.k.

Designation: Asst. Prof

College: Apollo college of Nursing,

Apollo College of Nursing ★ Apollo College of Nursing ★ Chennai - 600 095

Place: Chennai - 95

Date: 23/12/19.

CERTIFICATE OF CONTENT VALIDITY

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Signature with seal

S. KANCHANA M.Sc.,(N)
Associate Professor
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Place: CHENNAI

Date: 23/12/19

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INSTITUTE OF COMMUNITY MEDICINE
MADRAS - 600 003
MADRAS MEDICAL COLLEGE

Signature with seal PROFESSOR
Institute of Community Medicine
Madras Medical College
Chennai-600 003.

Name: Dr J[illegible]

Designation: Professor of Community Medicine

College: Madras Medical College, Chennai.

Place:
Date:

INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL COLLEGE, CHENNAI 600 003

EC Reg.No.ECR/270/Inst./TN/2013/RR-16
Telephone No.044 25305301
Fax: 011 25363970

CERTIFICATE OF APPROVAL

To
Mrs.S.SAJITHA PARVEEN
M.Sc (N) I Year
College of Nursing
Madras Medical College
Chennai-600003.

Dear Mrs.S.SAJITHA PARVEEN,

The Institutional Ethics Committee has considered your request and approved your study titled **"A STUDY TO ASSESS THE IMPACT OF MULTIMODAL NURSING INTERVENTION ON TUBERCULOSIS MANAGEMENT AMONG CLIENTS WITH TUBERCULOSIS ATTENDING GOVT. THIRUVATTEESWARAR HOSPITAL OF THORACIC MEDICINE AT CHENNAI-NO.26112019.** The following members of Ethics Committee were present in the meeting held on **12.11.2019** conducted at Madras Medical College, Chennai 3.

1. Prof.P.V.Jayashankar :Chairperson
2. Prof.R.Jayanthi,MD.,FRCP(Glasg)., Dean,MMC,Ch-3 :DeputyChairperson
3. Prof.N.Gopalakrishnan,MD.,DM.,FRCP, Vice Principal Director,Inst.of Nephrology,MMC,Ch : Member Secretary
4. Prof.Bharathi Vidya Jayanthi,Vice Principal Director,Inst. of Pathology,MMC,Ch- : Member
5. Prof.R.Muthuselvan,MD,Prof. Inst. of Int.Med,MMC, Ch-3 : Member
6. Prof.Alli, Prof. Inst. of Gen.Surgery,MMC : Member
7. Prof.Shobha, Prof, Inst.of O&G, Chennai : Member
8. Prof.Rema Chandramohan,Prof.of Paediatrics,ICH,Chennai : Member
9. Prof. Sudha, Prof. Inst. of Pharmacology,MMC,Ch-3 : Member
10. Prof.K.Ramadevi,MD., Director, Inst. of Bio-Chemistry,MMC,Ch-3 : Member
11. Prof. S.Lakshmi, Prof. of Paediatrics ICH Chennai : Member
12. Thiru S.Govindasamy, BA.,BL,High Court,Chennai : Lawyer
13. Tmt.Arnold Saulina, MA.,MSW., :Social Scientist
14. Thiru K.Ranjith, Ch- 91 : Lay Person

We approve the proposal to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study and SAE occurring in the course of the study, any changes in the protocol and patients information/informed consent and asks to be provided a copy of the final report.

Member Secretary – Ethics Committee

CERTIFICATE OF PLAGIARISM

This is to certify that dissertation titled **"A STUDY TO ASSESS THE IMPACT OF MULTIMODAL NURSING INTERVENTION ON TUBERCULOSIS MANAGEMENT AMONG CLIENTS WITH TUBERCULOSIS ATTENDING GOVERNMENT THIRUVATTEESWARER HOSPITAL OF THORACIC MADICINE AT CHENNAI"** of the candidate **Mrs.S.SAJITHA PARVEEN** for the partial fulfillment of M.Sc. Nursing Programme in the branch of **COMMUNITY HEALTH NURSING** has been verified for plagiarism through relevant plagiarism checker. We found that the uploaded thesis file from introduction to conclusion pages and rewrite shows _____% of Plagiarism (_____% uniqueness) in this dissertation.

CLINICAL SPECIALTY GUIDE

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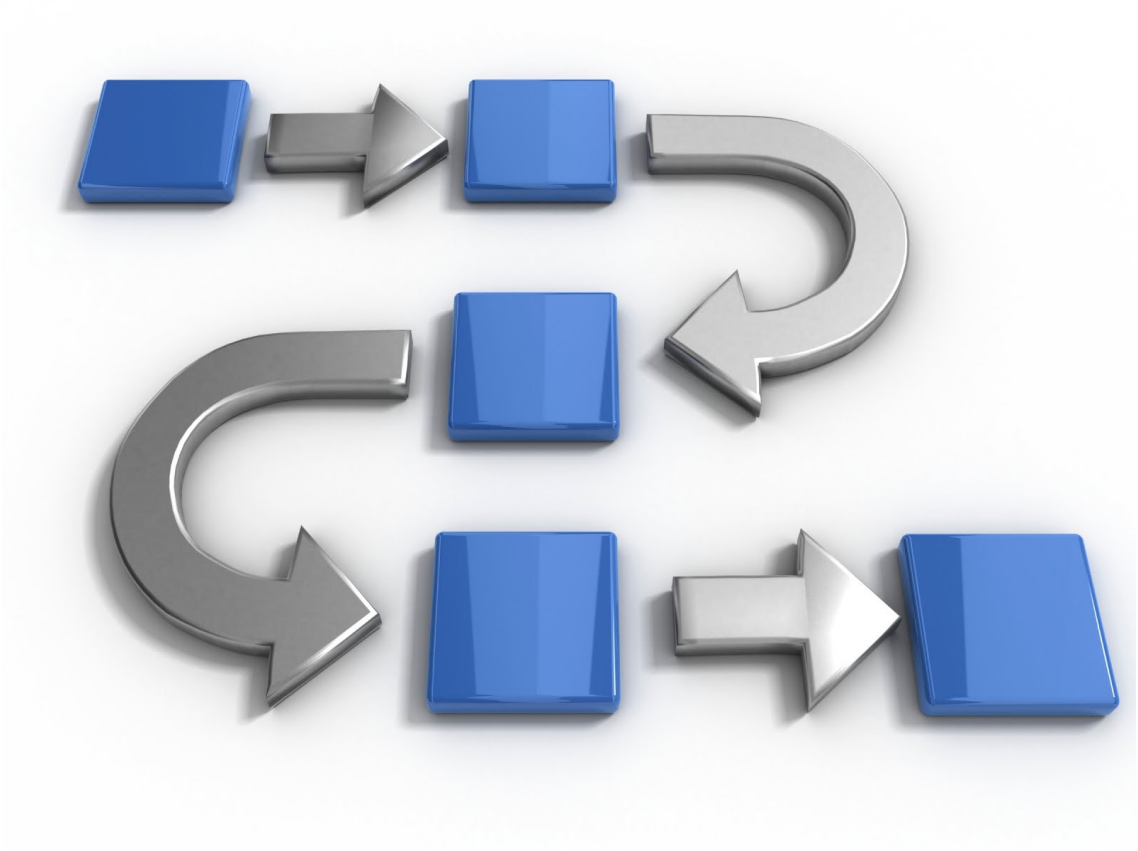
Chapter-I
Introduction

Chapter-II
Review of Literature

Chapter-III
Research Methodology

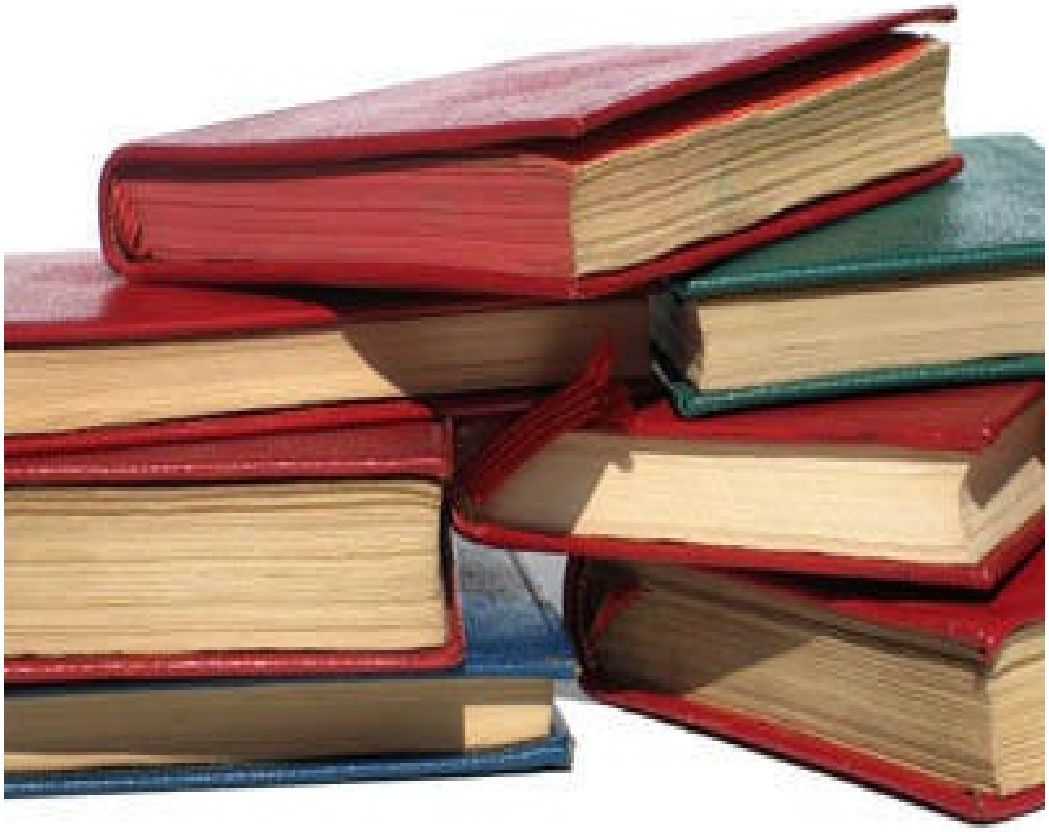


Chapter-IV
Data Analysis & Interpretation

Chapter-V
Discussion

Chapter-VI
Summary, Implication, Recommendation, Limitation & Conclusion

References



Appendices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