**CHAPTER-I**

**INTRODUCTION**

**“Even a minor event in the life of a child is an event of that child’s world and thus a world event”.**

***Gaston Bachelard (1962)***

 Children are inheritors of one past and the seed of our future. It is to them that the world bequeaths its achievements and its treasures, yet they are at the end of the queue when the goodies of government are being distributed, especially in the developing countries.

Respiratory diseases are very often found in children especially the respiratory infections. It is one of the leading causes of morbidity and mortality in young children. Respiratory problems are responsible for a large proportion of pediatric admissions and outpatient attendance. The respiratory problems which are commonly seen in children are pneumonia, bronchitis, bronchial asthma and tonsillitis.

The important risk factors associated with respiratory disease include malnutrition, low birth weight, climate variations especially in winter and rainy season, overcrowding house, poor ventilation, air pollution, lack of environmental sanitation and poor socio economic conditions.

The common clinical features related to respiratory diseases are cough, dyspnea, expectoration, chest in drawing, chest pain, cyanosis and respiratory sounds like wheezing, strider, grunting and snoring.

Each year more than 10 million children die before they reach their fifth birthday. Seven in ten of these deaths are due to just five preventable and treatable conditions: pneumonia, diarrhea, malaria, measles, and malnutrition, and often a combination of these each year more than 10 million children die conditions. The estimated proportion of deaths in which under nutrition is an underlying cause is roughly similar for diarrhea 61%, malaria 57%, pneumonia 52%, and measles 45%. This problem causes a higher under five mortality rate (UMR) especially in South-East Asia.

Pneumonia is the most important cause of morbidity and mortality in children aged under 5 years worldwide. Between 11 and 20 million children with pneumonia worldwide will require hospitalization, and more than 2 million will die from pneumonia. South Asia and Sub-Saharan Africa have the highest incidence of pneumonia cases among children under five Several risk factors for acquiring respiratory infections in developing countries, such as poverty, low family income, low parental education level, low birth weight, malnutrition, and lack of breastfeeding, have been described.

 -**Kelkar.R et.all** **(2013)**

The incidence of pneumonia and bronchitis has been studied in 2205 infants over the first five years of life. Since access to health services is limited in many developing countries, prompt treatment may also require training health workers to diagnose and treat children with pneumonia in the community. Studies show that community health workers can effectively manage uncomplicated pneumonia in the community. Mother's knowledge can be very important factors in reducing the occurrence of pneumonia in children under five years. but it's not been sure that community involvement, which can be included mothers knowledge regarding pneumonia assessment and prevention is important issue that supports for decreasing pneumonia occurrence. As guidance, it becomes necessary to conduct this research for providing information related with it. The main objective of the current study was to describe knowledge and perception about pneumonia disease among mothers of children under 5 years.

 -**Sharma.K et.all** **(2011)**

 Pneumonia is an infection of the lungs that causes fever, coughing, and difficulty in breathing.  It can be caused by viruses, fungi, or bacteria.  Bacteria such as Haemophilus influenza type B (Hib) and pneumococcus are estimated to cause more than 50% of pneumonia deaths in children under 5 years of age.  Children under five in are most at risk, particularly those who are malnourished, live in unhygienic conditions, are exposed to indoor air pollution, and lack access to health care.

 - **Laxmaiah,A(2010)**

On November 2, nearly 100 leading global health organizations from around the world joined forces to recognize the first annual World Pneumonia Day and urge all governments to take steps to fight pneumonia.  The [World Health Organization](http://www.who.org) and the [UN Children’s Fund (UNICEF)](http://www.unicef.org) released a global strategic plan to prevent and respond to pneumonia called the [Global Action Plan for the Prevention and Control of Pneumonia (GAPP)](http://www.who.int/child_adolescent_health/documents/9789241596336/en/).

The GAPP, which is attached, focuses on the 68 highest burden countries and emphasizes a three-prolonged pneumonia control strategy which (1) protects children by promoting exclusive breastfeeding and ensuring adequate nutrition and good hygiene; (2) prevents the disease by vaccinating them against common causes of pneumonia such as Streptococcus pneumonia (pneumococcal disease) and Haemophilus influenzae type b (Hib); and (3) treats children at the community level and in clinics and hospitals through effective case management including antibiotics. If fully funded, the GAPP projects significant declines in sickness and deaths from pneumonia by 2015. That is, not co-incidentally, the final year of the [Millennium Development Goals](http://www.un.org/millenniumgoals/).  Simply put, meeting the Fourth Millennium Goal on reducing child mortality will not be possible without progress against pneumonia.

A quick word is needed about the [Global Alliance on Vaccines and Interventions (GAVI).](http://www.gavialliance.org/media_centre/press_releases/2009_10_30_pneumonia_vaccination.php)  Launched in 2000, the GAVI Alliance is a global health partnership representing stakeholders in immunization from both private and public sectors: developing world and donor governments, private sector philanthropists such as the Bill & Melinda Gates Foundation, the financial community, developed and developing country vaccine manufacturers, research and technical institutes, civil society organizations and multilateral organizations like WHO, UNICEF, and the World Bank.  Thanks to GAVI, more and more countries have access to vaccines that prevent pneumonia and other diseases. GAVI has provided funding for introducing Hib vaccines in 59 countries with impressive results.

Pneumonia is a disease that preys on the most vulnerable amongst us.  But it need not be this way.  We can prevent and treat pneumonia with proven interventions.  We have the knowledge but must now generate the commitment.  May World Pneumonia Day help bring about the attention, resources, and political will to protect the health of children in and around the world.

**NEED FOR THE STUDY**

**“**[**The first question that comes up is why would you want to stop a cough? The cough is a mechanism your body uses to protect you from pneumonia. So the last thing we want to do is take away your body's natural defenses. We're not in favor of cough medicine from the get-go.**](http://en.thinkexist.com/quotation/the-first-question-that-comes-up-is-why-would-you/1361230.html)**”**

-[**Dr. Meg Fisher**](http://en.thinkexist.com/quotes/dr._meg_fisher/)**(2012)**

 “Pneumonia is an inflammation with consolidation of the parenchyma of the lungs.”

In our country most of the peoples living in the rural areas like villages, and the most of the peoples are illiterates they don’t have proper knowledge regarding care of under five child and also common health problems especially pneumonia. (prevention, signs & symptoms, management, risk factors, treatment and hospitalizations,) most of the cases in under five in hospital is pneumonia mortality also more compared to other conditions like diarrhea, measles, malnutrion etc. so it very necessary to “educate the mothers of under five children about the pneumonia because under fives always follows their mothers and only mother can share their feelings.”

 The Global statistics [Pneumonia](http://www.cdc.gov/Features/Pneumonia/) (2010) is a leading killer of both children and adults around the globe. Few know that pneumonia kills approximately 2 million children under the age of five years worldwide each year. Resource-poor countries are particularly hard hit for every child who dies of pneumonia in a developed country; more than 2,000 children die of pneumonia in developing countries. In the US, over 1 million children and adults are admitted to the hospital for pneumonia each year.

 **Study of childhood pneumonia since the Board of Science and Technology for International Development (BOSTID)** studies were done in the 1980sThe goal of PERCH is to identify the expected etiologies of pneumonia in 2015, a time when the burden of the major causes of bacterial pneumonia in the developing world, *Streptococcus pneumoniae* and *Haemophilus influenzae* type b (Hib), will likely be significantly reduced by widespread introduction and use of conjugate vaccines. Moreover, PERCH capitalizes upon new molecular diagnostic techniques that were not available 2 decades ago when the BOSTID studies were carried out. Another salient difference between PERCH and the BOSTID studies is that the 7 sites participating in PERCH will follow a highly standardized protocol, which includes standardization of enrollment criteria, specimen collection, and laboratory testing.

 **According to Asian perspective pediatric respiratory reviews by V.Sing**. Pneumonia results in two million deaths each year among children worldwide (20% of all child deaths), 70% of them in Africa and South-east Asia. Most countries in Africa and Asia record 2–10 times more children with pneumonia (7 to 40/100 annually) than in the USA. Apart from resource constraints and an overburdened health system, there is lack of uniformity in defining pneumonia. Most nations employ a WHO standard case management protocol using age specific cut-offs for increased respiratory rates and chest in-drawing for a clinical definition of pneumonia.

The limited data available on the causative organisms have identified Streptococcus pneumonia, Haemophillus influenza and viruses such as respiratory syncytial virus (RSV), influenza, Para influenza and adenoviruses as the major pathogens. Measles infection increases pneumonia morbidity and mortality. Low birth weight, under-nutrition, hypovitaminosis A, zinc deficiency, lack of breastfeeding, air pollution (including environmental tobacco smoke) and over-crowding increase the risk for pneumonias in children. Standard case management protocols used for acute respiratory infections (ARIs) in these countries have brought down the disease burden but an improvement in the diagnostic algorithm is needed to appropriately recognize those with associated wheeze. Research is needed to find effective and affordable preventive strategies.

**According to Indian statistics social audits for community action 2012 :** A tool to initiate community action for reducing child mortality by D. Nandan, S.K.Misra, M.Jain, D.Singh, M.verma, V.sethi in 07-2005 to 09-2005 study says neonatal mortality due to pneumonia is 38/100 live birth that is 12.6% in live birth, 59/100 live birth that is 22.7% in live birth and pneumonia mortality in under fives is 15/100 live birth that is 13.4 in live birth.

**According to internet journal of pulmonary medicine 2007 by saurav chatarjee** In immunization clinic of Calcutta national medical college and hospital incidence of pneumonia in India ranges between 20-30/100 live birth that is 20-30% in live birth this is due to high prevalence of malnutrition ,low birth weight , indoor air pollution .ARI is an important cause of morbidity and mortality in under five years of age who suffer about 5episodes of ARI per year, thus averaging 238 million attacks consequently.

**According to Regional statistics 2009** Modifiable risk factors for acute lower respiratory tract infections by M.R.Savitha, S.B. Nandeeshwara, M.J. Pradeep Kumar, Farhan-ul-haque, and C.K. Raju says done this study in 15 February 2007 in the department of pediatrics, government medical college Mysore, India. The study says 104 ALRI cases fulfilling WHO criteria for pneumonia in the age group of 1month to 5 years were interrogated modifiable risk factors as per a predesigned Performa 104 healthy control children in the same group were also interrogated the significant socio-demographic risk factors were parental illiteracy , low socioeconomic status overcrowding and partial immunization significant nutritional risk factor were administration of prelacteal, early weaning, anemia, rickets, and malnutrition significant environmental risk factors were use of kerosene lamps, biomass fuel pollution and lack of ventilation.On logistic regression analysis, partial immunization, overcrowding and malnutrition were found to be significant risk factors.

 **A report by Director General of Health Services, Government of India**, indicated that ARI contributes towards about one third to one fourth of all under five deaths in India and it stands at 52nd rank in the global scenario of under five morality in the world.

## It is sad to learn that in our global community, almost 10.5 million children die every year i.e., 30,000 children die a day, 21 children die in a minute every day before reaching their fifth birthday due to various infections. Ninety percent of these under five children have died due to ARI.

Infections of the respiratory tract are perhaps the most common ailment in children. Every year acute respiratory tract infections (ARI) are responsible for an estimated 4.1 million deaths worldwide. It is estimated that Bangladesh, India, Indonesia, and Nepal together account for 40% of the global ARI mortality. About 90% of the ARI are due to pneumonia. On an average, children below 5 years of age suffer about 5 episodes of ARI are responsible for about 30%to 50% of visits to health facilities and for about 20-40% of admissions to hospitals.

In India, in the states and districts with high infant and child mortality rates, ARI is one of the major causes of death. Hospital records from states with high infant mortality rates show that up to 13% of in-patient death in pediatric wards are due to ARI.

The acute respiratory infections ranks second in the mortality rate of children one to four years of age group. The respiratory infections are described according to the anatomic area of involvement. The upper respiratory tract infections are common cold, Pharyngitis, Tonsillitis. The lower respiratory tract infections include bronchitis, pneumonia.

The most important aim of the CSSM programme is to improve the knowledge of the mothers regarding prevention and home management of cold, cough, recognition for seeking appropriate medical care to reduce the mortality state. So a need arises to concentrate on assessing the mother knowledge, attitude regarding respiratory infections and also giving health education regarding respiratory infections.

##  Health education on prevention of Acute Respiratory Tract Infection helps the mothers to bridge the identified gap of knowledge, practices towards ARI and in turn reduces the under-five mortality and morbidity.

 The nurses and allied health care professionals plays an important role to bring global awareness to prevent Acute Respiratory Tract Infection among mothers of under five by assessing their existing child rearing practices towards prevention of ARI. Having many benefits attached to prevention of acute respiratory infections and to prevent many associated complications, the investigator observed that there is necessity to evaluate knowledge of mothers regarding prevention of acute respiratory infections staying in selected anganwadi’s of Belgaum city. Structured teaching programmes on prevention of acute respiratory infections equip the mothers with necessary knowledge and skills in prevention of acute respiratory infections. Hence the study undertaken to evaluate the effectiveness of structured teaching programme with the purpose to prepare standardized health education material to bring awareness in the mothers regarding prevention of acute respiratory infections, to promote the mothers to take self-efforts to prevention of acute respiratory infections and help to gain knowledge about prevention of acute respiratory infections.

**According to investigator experience.** Near to my house most of under fives children’s getting high fever and sever cough during coughing the children’s breath very rapidly and grunting and the cough was unproductive. The parents always take their children’s to hospital. One day this type of case came when I was in hospital for minor treatment as a nurse I come to know this is signs and symptoms of pneumonia. I ask the mother regarding child illness mothers unable to explain about the child condition its make me to interest to do this study to assess the knowledge of mother regarding pneumonia

Children are our future. Their energy and hope inspires the older generation. Acute Respiratory Tract Infection (ARI) in children less than five years old is the leading cause of childhood mortality in the world. Acute Respiratory Infection is the most common cause of hospitalization and death in children living in developing countries. The statistics show that respiratory Infections in infants and children is a major problem that accounts for a large share of childhood mortality and morbidity.

**STATEMENT OF THE PROBLEM:**

 Effectiveness of structured teaching programme on knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection at selected hospitals, Karimnagar, Telagana.

**OBJECTIVES:**

 The objectives of the study were to,

* assess the level of knowledge regarding prevention of pneumonia before and after the structured teaching programme among mothers of under five children with acute respiratory tract infection.
* determine the effectiveness of structured teaching programme on prevention of pneumonia among mothers of under five children with acute respiratory tract infection.
* associate the post test knowledge score regarding mothers of under five children with acute respiratory tract infection with selected demographic variables.

**OPERATIONAL DEFINITIONS:**

**Effectiveness: -** Refers to significant increase in knowledge about prevention of pneumonia and common respiratory problems after structured teaching programme, which in terms of response towards knowledge.

**Structured teaching programme** - Refers to systematically prepared teaching programme which will be taken for 45 minute to educate the mothers of under five children regarding pneumonia.

**Knowledge: -** Refers to awareness of mothers regarding prevention of pneumonia and common respiratory problems as revealed by knowledge scores obtained from structured questionnaire.

**Prevention: -** Refers to control of the pneumonia and acute respiratory tract infection.

**Pneumonia** – Refers to “Pneumonia is an inflammation with consolidation of the parenchyma

the lungs.

**Mother’s of under five children’s –** Refers to mothers of under five children taking care of

them at home.

**ASSUMPTIONS:**

1. Mothers of under five children with acute respiratory tract infections may have some knowledge regarding prevention of pneumonia.
2. Structured teaching programme will enhance the knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.

**DELIMITATIONS:**

The study is delimited to,

1. This study is limited to mothers of under five children with acute respiratory tract infections

prevention of pneumonia in selected hospitals in karimnagar.

2. Sample is limited to 30 mothers of under five children with acute respiratory tract infections.

**HYPOTHESES:**

 H1: The post test knowledge score on prevention of pneumonia among mothers of under five children with acute respiratory tract infection was significantly higher than their pre test knowledge level.

H2: There is a significant association between pretest knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection with their selected demographic variables .

**Epilogue:**

This chapter deals with Introduction, Need for the study, Statement of the problem, Objectives, Operational Definitions, Hypothesis, Delimitations and Conceptual framework.

**CONCEPTUAL FRAME WORK:**

A conceptual frame work is a theoretical approach to study the problems that are scientifically based and emphasis the selection, arrangement and clarification of its concepts. It states functional relationship between events and is not limited to statistical relationship.

 (FOWETT 1980)

 Imogine king’s theory of goal attainment is based on system theory and behavioral sciences. king first formulated a conceptual frame work for nursing(1971) and then derived a theory of goal attainment. king developed a transaction model.

 Major components stated in interpersonal system in which two are usually strangers come together in a health care organization to help and to be helped.

The main components in this model includes;

A process of perception and communication between person and environment and between person represented by verbal and nonverbal behaviors that are goal directed.

 A person where by information is given from one person to another either directly in face to face meetings or indirectly in telephone.

 Observable behaviors on human beings interacting with the environment.

 In this present study investigator selected kings goal attainment theory .the main concept of this model includes;

**Action :** assess the level of knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection by administering questionnaire**s.**

**Interaction:** conducting structured teaching programme by health education. Health education includes the definition, causes, risk factors, pathophysiolgy, clinical manifestations, diagnostic evaluation, management and alternative measures, prevention of pneumonia among mothers of under five children.

**Transaction**: evaluating effectiveness of structured teaching programme on prevention of pneumonia among mothers of under five children with acute respiratory tract infection by administering questionnaires.

**CHAPTER-II**

**REVIEW OF LITERATURE**

 Review of literature refers to an extensive and systemic examination of publication relevant to the research project. Nursing research is considered as a continuous process in which knowledge gained from earlier studies is an integral part of research in general. One of the most satisfying aspects of the literature review is the contribution. It makes to the new knowledge, insight and general scholarship of the researcher.

**The literature arranges under the following headings:**

1. **Literature related to incidence and prevalence of pneumonia.**
2. **Literature related to knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.**
3. **Literature related to effectiveness of structured teaching programme on prevention of pneumonia.**
4. **LITERATURE RELATED TO INCIDENCE AND PREVALENCE OF PNEUMONIA:**

 **Taruro G.V.(2013)** conducted a pre-experimental study in Karnataka state to determine the mother’s knowledge on pneumonia and its prevention among children in a Sulliataluk PHC at Karnataka. The sample of the study was 30 mothers selected by systematic sampling. The tool used was structured knowledge questionnaire. Findings of the study showed that 76-100% had adequate knowledge, 51-75% had moderately adequate knowledge and 50% had inadequate knowledge. [ p value < 0.001].

 **Mali sachin popat (2012)** a community based longitudinal study was conducted to investigate acute respiratory infections (ARI) in children. A cohort of 91 children under 3 years age was followed up for 1 year, leading to 2047 fortnightly observation. On an average every child had 11.3 months of follow up. The overall incidence of ARI was 6.42 episodes per child per year. On an average each episode lasted for 5.06 days. Mean duration of ARI during one year was 32.5 days per child. Most of the ARI episodes in children (91.3%) were if simple Cough & Cold (no pneumonia). However 8.2% developed pneumonia and only 0.51% had severe pneumonia. Incidence of ARI was almost same in male and female children. There was no significant difference in incidence among various age groups. But the incidence of pneumonia was significantly higher among infants. Children of poor housing with smoke producing conditions suffered more frequently.

 **Ericson.R.(2011)** conducted a prospective study to assess the percentage of pneumonia related mortality and bacterial composition of nasopharyngeal flora using nasopharyngeal aspirates. The samples were114 children,aged 2-59 months. The Kirby –Bower method was used to determine antibiotic resistance throughout the study.The percentage of acute respiratory tract infection and pneumonia among the population tested was 24 percent and 11 percent respectively. This study indicates that streptococcus pneumonia was often resistant to cotrimaxazole (31%) but only 9% were resistant to chloromphenicol and 14% to penicillin .Hemophillus influenza was uniformly sensitive to ampicillin and only 4%were resistant to chloramphenicol and 11% to cotrimoxazole.This study concludes that streptococcus pneumonia and hemophillus influenza resistance to cotrimoxazole is important and warrants larger clinical trials using chloramphenicol.

 **Roshini jerald** **(2010)** study conducted on knowledge and practice regarding Acute Upper Respiratory Tract Infection in selected rural area in South Bangalore. Conceptual framework adopted for the study was based on Nightingale’s Environmental model. A descriptive and evaluative approach was adopted for the study. The data was collected by Semi structured interview schedule. Sample consisted of 60 mothers using simple random sampling technique. Main findings of the study were there is significant association between knowledge and practice with selected demographic variables like education occupation medium of cooking type of. There is high positive correlation between knowledge and practice. About 48.3% on mothers had inadequate knowledge about common cold. Majority 70% of mothers practice level regarding management of AURI was unsatisfactory, so the need for improving the level of knowledge and practice was widely recognized. Mass and individual education in regional languages to enlighten the mothers can be organized at all levels of health facilities.

 **Atikson.k. (2009)** conducted a prospective community based study to assess the risk factors for acute respiratory tract infection.288 children aged 0-2 years were taken as samples. Children were monitored weekly episodes of upper and lower respiratory tract infections were registered. Risk factors for upper respiratory tract infections including attending a child care center (relative risk 1.7compared with home care.)and sharing a bed room with adults and risk factors for lower respiratory tract infection includes attending a child care center relative risk 3.3 exposure to passive smoking (relative risk 2.1 )and sharing bed room with children aged 0-5 year (relative risk =2.0 for two other children)Breast feeding tended to be protective for lower respiratory tract infection. The study indicated that the population attributable risk for lower respiratory tract infection associated with passive smoking and child care centers was 48% respective.

  **Misra.S,Kumar.H,(2008)** a study was conducted on Acute lower respiratory infection (ALRTI) is the leading cause of death in children below five years of age. A hospital based case control study was undertaken to determine risk factors associated with severe lower respiratory tract infection (LRTI) in under-five children. A case definition of severe ALRTI as given by World Health Organization (WHO) was used for cases. 512 children including 201 cases and 311 controls were enrolled in the study. On stepwise logistic regression analysis it was found that lack of breastfeeding (OR: 1.64; 95 percent CI: 1.23-2.17); upper respiratory infection in mother (OR: 6.53; 95 percent CI: 2.73-15.63); upper respiratory infection in siblings (OR: 24; 95 percent CI: 7.8-74.4); severe malnutrition (OR: 1.85; 95 percent CI: 1.14-3.0); cooking fuel other than liquid petroleum gas (OR: 2.5; 95 percent CI: 1.51-4.16); inappropriate immunization for age (OR: 2.85; 95 percent CI 1.59-5.0) and history of LRTI in the family (OR 5.15, 95 percent CI 3.0-8.8) were the significant contributors of ALRTI in children under five years. Lack of breast-feeding, upper respiratory infection in mother, upper respiratory infection in siblings, severe malnutrition, cooking fuel other than liquid petroleum gas, inappropriate immunization for age and history of LRTI in the family were the significant risk factors associated with ALRTI.

  **Elli M,Costello AM(2008)** a study was conducted on the feasibility of acute respiratory infection (ARI) control in 5,535 rural preschool children was studied. The Primary Health Centre (PHC) staff and local practitioners (drug distribution canters) were identified and trained in recognition of moderate/severe ARI, referral, drug administration and in the education of the community. Functional ARI classification as envisaged in ARI control programme was followed. There was significant reduction in moderate (42% reduction) and severe (89% reduction) ARI episodes from year 1985 to 1987. Both ARI (27.8%) and non-ARI (18.3%) deaths showed reduction. Majority of children who died due to ARI were also unimmunized. The moderate and severe ARI related morbidity and mortality was significantly reduced in immunized children compared to unimmunized children. Although, strategies of National ARI control programme by health education, standard case management and strengthening of immunization is a good thought but it is clear that proper implementation of immunizations is going to pay more dividends. It is also evident that the local medical practitioners should be trained and involved in this control programme to have community faith as well as to avoid opposition.

  **Stekenburg, J Kashumba E (2007)** a study was conducted on Acute Lower Respiratory Tract Infection due to Chlamydia Species in Children Under Five Years of Age Sixty children under five years of age who were admitted with acute lower respiratory tract infection during a one year period were investigated for Chlamydial aetiology of respiratory infection. Diagnosis was based on antigen detection by direct immunofluorescence (DIF) in throat swab along with anti-Chlamydial immunoglobulin G (IgG) antibody demonstration by solid phase enzyme immunoassay (EIA). Chlamydia spp antigen was detected in seven (11.6%) cases, C. Pneumonia in six (10%) and C. Trachomatis *in* one (1.6%). Chlamydiaspp IgG antibody in serum was demonstrated in 24 (40%) cases, of which C. Pneumonia IgG was demonstrated in 18 (30%) cases. Taking the criteria of antigen detection (n=7) and high IgG antibody titre of 1: 512 (n=5) for a positive case, 12 (20%) children were found to be suffering from recent Chlamydial infection.

  **Stewart MK, Parker B, Chakraborthy J, begum H, In May (2007) John Hopkins university school of hygiene and public health .department of health in Baltimore**. They conducted a qualitative study on Acute respiratory infections in rural mat tab Bangladesh on perceptions and practice among mothers of under five children’s mothers recognized pneumonia is caused by exposed to cold and noticed by labored breathing , chest retraction , lethargy, and inability to feed as sign of sever disease needing treatment out side the home.

**II) LITERATURE RELATED TO KNOWLEDGE REGARDING PREVENTION OF PNEUMONIA AMONG MOTHERS OF UNDER FIVE CHILDREN WITH ACUTE RESPIRATORY TRACT INFECTION.**

  **Dhaar (2014)** conducted a prospective community based study to identify risk factors for Acute Respiratory Infections in 288 children aged 0-2years in the town of Sismiut, Greenland. Children were monitored weekly, and episodes of upper and lower respiratory tract infections were registered. Risk factor analyses were carried out using a multivariate Poisson regression model adjusted for age. Risk factors for upper respiratory tract infections included sharing of bedroom with adults. Risk factors for lower respiratory tract infections included exposure to passive smoking & sharing a bedroom with children aged 0-5years. The population attributable risk of lower respiratory tract infections associated with passive smoking and child-care centres was 47% and 48% respectively.

 **Stekelenburg J, Kashumba E, wolffers I. (2014)**They conducted a cross sectional, descriptive, study in October 2002 on factor contributing to high mortality due to pneumonia among under five children the study was consist of mothers of under five interviewed using questionnaire in Kalabo district Zambia in Leeuwarden medical center department of obstetrics and gynecology of Netherland, the reports says mother should me educated to recognize the signs and symptoms of pneumonia and to understand the importance of early and adequate treatment.

 **Galvez CA, Modeste N, Lee JW, Betancourt H, Wilkins RL,(2013)** They conducted a cross sectional study In February regarding Peruvian mothers knowledge and recognition of pneumonia in under five children’s in Universidad perinea, Lima, Peru. The duration of study was June to august sample size of the study was mothers of under five children’s was participated. The report of the study says all though percentage of mothers believing they can recognize pneumonia through rapid breathing and chest retraction seem to have increased in recent year. There is still sizable percentage of mothers who remains uninformed about pneumonia. Most of the mothers receive medical attention and health information from pneumonia campaign of Peruvian government in Television.

  **Shaj D.K Paul (2012)** a study was undertaken to identify various modifiable risk factor for acute lower respiratory tract infections. (ALRI) in children aged one month to five years. 104 ALRI cases fulfilling WHO criteria for pneumonia, in the age group one month to five years were interrogated for potential. Modifiable risk factors as per a pre-designed proforma. 104 healthy control children in the same age group were also interrogated. The significant socio demographic risks factors were panel illiteracy, low socio-economic status, overcrowding and partial immunization. Significant nutritional risk factors were administration of pre lacteal feeds, early weaning, anaemia, rickets and malnutrition. Significant environmental risk factors were use of kerosene lamps, biomass fuel pollution and lack of ventilation. On logistic regression analysis, partial immunization, overcrowding and malnutrition were found to be significant risk factors. The researcher concluded that the modifiable risk factors for ALRI can be tackled by effective education of the commonly and appropriate initiatives taken by the government.

 **Akilandeswari(2011)** a longitudinal study was conducted on What is Acute Respiratory Infection (ARI) morbidity among under five children in rural areas and What are the epidemiological factors associated with such ARI morbidity**. Participants are** Children aged less than 5 years. 63 children were followed up with periodic home visits at two weeks interval for 6 months. Frequency of ARI episodes were studied and association with study variables were analyzed. Overall incidence density rate of ARI episodes was 19.57 (C.I.- 15.60-24.57) /100 person-months at risk. Incidence was highest in infants (23.9/100 person-months). Risk ratio analysis showed that low socio-economic class, low birth weight, under-nutrition of the child, inadequate immunization, children not exclusively breastfed and indoor smoke pollution were significantly associated with increasing number of ARI episodes. The study strongly points towards the importance of basic health promotional measures like proper infant feeding practices, proper nutrition of the child, improved general conditions of living in prevention and control of ARI.

  **Dollman.W.B.(2010)** a study conducted on An evaluation of diarrhoeal diseases and acute respiratory infections controlled programme in Delhi slum with objective of effective early domiciliary management and health seeking behavior in case of appearance of danger signs in ARI. The result showed that one or more danger signs were known to 80% of mothers. Only 16% of mothers aware that ARI are mostly mild or self limiting. Though the mothers are aware of danger signs of ARI mothers still seeking Medical advice for mild cases of ARI and doctors are also prescribing drugs. Knowledge about domiciliary management was deficient in mother for mild ARIs.

  **Gryczyeska,Kbas (2010)** a study conducted on “How do mothers recognize and treat pneumonia at home?” Two hundred mothers of under-five children having lower respiratory tract infection were interviewed with the help of pre-tested unstructured questionnaire to know the danger signs perceived by her in a child suffering from pneumonia and home remedies used by them before seeking medical help. Retraction and refusal to feed were the most common symptoms perceived as dangerous. Retraction in 91.1% and fast breathing in 8.1% cases. Honey 25% and ginger 27% were the most common home remedies used for the relief of cough, self advised medications were used by 24% of mothers and majority 58.4% gained this knowledge from mass media.

  **KaraK. IRC (2009)**a study conducted on ARI concepts of mothers in Punjabi villages, a community based study. Pneumonia is a major child killer in the developing world; to prevent such deaths, mothers must be able to differentiate pneumonia from common cold. Local concepts regarding these illnesses were studied by interviewing 315 mothers of young children in their homes in Punjabi villages. Mother described Pneumonia differently from cough and cold but only few said fast breathing as a sign of pneumonia. Both illness were thought to be caused by “coldness” and initially treated with “heat-producing” home remedies and feeding was continued in both. Spiritual healers were not consulted for cough and cold or pneumonia virtually all mothers said that allopathic medicines were necessary for both illness and 2/3rd said that if child is not improved after 2 days of a given medicine they would change the medicine or the doctor.

 **Muhe L,(2009)** He conducted a study in the Department of pediatrics and child health, Ababa, Ethiopia June 1996 in Ethiopia ARI accounts for 33% of infants and 20% of mortality among under five children’s due to pneumonia author interviewed 222 mothers in hospital and 230 controlled mothers in community were also studied most of mothers did not recognize rapid breathing and chest indrawing as key signs of pneumonia. There were good understanding between mothers and doctors; the author recommends intensive health education and further ethnographic studies on community belives about ARI in children.

 **Saini NK ,Gaur DR ,Saini V , Lal S(2008)** They conducted a study in department of SPM medical college Haryana. In the year of 1992 June 24 on Acute respiratory infections in children’s; about knowledge and practice of mothers in rural Haryana. There were 304 mothers of under five data were collected on knowledge and practice of mothers in two villages of block beri district rohtak for devising a standard management plan. The interview report was 23% mothers recognized pneumonia by fast breathing 11.2% recognized pneumonia by chest indrawing and only 1.3% of mothers knows infective origin of ARI .

 **Mishra S, Kumar H, Sharma D,(2008)** They conducted a study on how do mothers recognize and treat pneumonia at home in the year of 1994 January, in pediatric department of kalawati saran children hospital New Delhi. There were two hundred mothers of under five children participated in unstructured questionnaires among danger signs perceived by her in a child suffering from pneumonia the 25% of mothers honey 62.5% of mothers use zinger to relief cough 58% of mothers gained home remedial knowledge for pneumonia from mass media 24% mothers self advised for children.

 **Simiyu DE (2008)** conducted astudy to assess on mother’s knowledge, attitude and practice regarding acute respiratory infections to control ARI in developing countries. A total of 309 mothers were interviewed out of which 34% had no formal health education, only 18% of mothers described pneumonia satisfactory and 87.1% of the mothers said they would seek health center services for severe ARI. Formal education had a positive influence on the KAP of the mothers. The study revealed that health education programs can only be effective when designed to take into account the prevailing KAP of the community towards ARI in their children.

. **Simiyu DE, Wafula EM, Nduati RW,(2007)** They conducted a community cross sectional, survey was carried out for focusing knowledge attitude and practice regarding ARI in children in Baringo District, Kenya, in June 2010 there were 308mothers of under five attended a mixed structured and unstructured questionnaire, the report face mothers had good knowledge of mild form of ARI and pneumonia. But not the severe form, there attitude to ARI and pneumonia was appropriate, but subsequent practice were not. Low utilization of health services for moderate ARI and pneumonia may result in continued high mortality because of delayed identification of seriously ill children.

 **Wafula.EM.(2007)** across sectional study to assess the parental knowledge, attitude, and antibiotic use for common child hood acute upper respiratory tract infection. They involved 421 parents who were surveyed by using an interviewer administered questionnaire. Nearly 68%,69%and 76%of them believed that antibiotics was helpful in treating the common cold, cough and fever respectively 29%of parents who thought that their child with acute respiratory tract infection needed antibiotics were not prescribed with any 17%beleieved that antibiotics were unnecessary when prescribed 28%of parents had requested for antibiotics and 93%received what they requested for their child with acute upper respiratory tract infection. This study shows that parents often have inadequate knowledge and misconception on antibiotics use for acute upper respiratory tract infection in children. Improved parental education may reduce unnecessary antibiotics prescription and antimicrobial resistance in community.

 **Sherene G Edwin(2007)** study conducted on knowledge and practices of mothers in rural Haryana. In this study data was collected on knowledge and practices of mothers in two villages of block Beri of district Rohtak for devising a standard management plan. 304 mothers were interviewed. About 23% of mothers recognized pneumonia by fast breathing and 11.2% recognized severe pneumonia by chest in drawing. Only 1.3% mothers knew infective origin of ARI. Although most of them were convinced about continuation of breast-feeding, 70% of them were advising food restriction, use of herbal tea in ARI was widely prevalent and so was the practice of putting warm mustard oil in ear for curing ear pain. Primary health centre was the most frequent place for treatment of ARI.

 **John Milton** **(2007)** study conducted on knowledge, attitude and practice regarding acute respiratory infection. 106 mothers in rural area were interviewed to determine how they would recognize pneumonia in children, what therapies they would practice with mild acute respiratory illness (ARI) and pneumonia and the feeding practices they have adopted. Most mothers recognized pneumonia by observing the quick respiratory ate and difficulty in breathing, with regard to management of mild ARI episodes, more than ½ of the mothers preferred not to give any treatment or to use only home remedies. In pneumonia a majority preferred to consult a qualified doctor. As far as feeding concerned, most of them stated that they would continue feeding, fluids, and breastfeeds. Only 10% said they would stop feeding.

  **Hildenwall H, Rutebemberwa E, Nsabagasani X, Pariyo G, Tomson G, (2007)** They conducted a study on local illness concepts implications for management of childhood pneumonia in eastern Uganda in march 2008 there were mothers of under five participated in group discussion including DVD showing children suffering from respiratory problems and pneumonia the study reports says there is community gap on symptoms and biomedical treatment for pneumonia .To promote appropriate management of childhood pneumonia the role of antibiotics must be emphasized and local illness concept should be addressed in behavior change communications.

 **GokulPuri.(2007)** conducted a cross sectional survey in urban slum of Trans Yamuna, covering 1307 under five children for five days. A pre tested house hold tally marking form was used to interview the care mothers. The result shown that 191 of 1307 children surveyed, had an attack of acute respiratory tract infection in the preceding 2 weeks. The common symptoms of acute respiratory tract infection cases were mild running nose, cough , fever only 8.8 had fast feeding. One or more danger signs were known to 80 % of mothers had sought treatment. Acute respiratory tract infections are mostly mild or self-limiting but only 16%of care takers perceived so and doctors also prescribed medicines. The study concluded that though aware of danger signs of acute respiratory tract infection care takers were still seeking medical advice for mild cases of acute respiratory tract infection and doctors were prescribing drugs. Correct home based management was deficient in community knowledge of danger symptoms was low and medical advice was being sought.

 **Daniel Benti GT, Lee Seema, Khadebwal. (2004)** descriptive survey study was conducted in Chennai to assess the knowledge on management of children at home with upper respiratory tract infection among mothers attending village clinic. A sample of 50 mothers was selected by convenient sampling technique. Data collected using a self administered questionnaire. The study finding demonstrates that in case of overall level of knowledge, 37.6% had inadequate level of knowledge, 14.3% had adequate level of knowledge and 48% of the mothers had moderate level of knowledge. In the overall level of management, 45.3% had inadequate level of management, 15.3% had adequate level of management and 39.4% of mothers had moderate level of management. So the study indicates that there is knowledge deficit among the mothers and is varying with demographic variables.

**III. LITERATURE RELATED TO EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PREVENTION OF PNEUMONIA.**

 **Neil M Graham (2013)** descriptive study was conducted in Dharwad on the effectiveness of planned teaching programme on prevention of pneumonia among mothers of children having acute respiratory infection. One group pre-test post-test design was adopted to conduct the study and sample taken were 60 mothers of under-five children. Structured questionnaire was used in this study. The pre-test scores shows that 14 mothers had (23.33%) inadequate level of knowledge and 46 mothers had (76.67%) moderate level of knowledge and the post-test scores after the planned teaching programme shows that 59 mothers had (98.33%) adequate knowledge and only 1.67% with moderate level of knowledge. This shows that there is significant difference in the pre-test and post-test level of knowledge and it is significant at p<0.001. This study concludes that planned teaching programme is effective in enhancing knowledge of mothers regarding pneumonia and this study conclude that it is the responsibility of health workers to organize such educational programmes in community.

 **Khan AZ, Tickoo R (2012)** quasi-experimental study was carried out in the pediatric medical wards of Raja Muthiah Medical college and Hospital (RMMCH) at Chidambaram to evaluate the effectiveness of structured teaching programme (STP) on acute respiratory infections (ARI) among the mothers of hospitalized children. A sample of 50 mothers of under five children with ARI was chosen. Structured questionnaire used to assess the knowledge, attitude and practice of mothers on ARI. The study findings revealed that after STP there was a significant improvement in the knowledge, attitude and practice of mothers regarding ARI. Thus it was found that the simple STP to mothers of ARI children was effective.

 **Bolam A, Manandha DS, Shrestha P, Ellis M, Costello AM.(2012)** They conducted study in 14 march 2012 by in urban Katmandu and periurban area of southwest of the city Nepal. 540 mothers randomly allocated to evaluate impact postnatal health education on infant care and family planning practices .received structured baseline house hold questionnaires for 20 minutes on breast feeding, immunization, knowledge of infant signs suggesting pneumonia. Study report says mothers has no impact on infant feeding, care, pneumonia, immunization although impact of family planning may be slightly enhanced.

 **Anh NT, Tram TT, Tri L, Huu TN, Pedersen FK, Mogensen K, (2011)** Conducted a study in the department of pediatric hospital, No.1, Su van Hanh, Ho Chi Minh City Vietnam upon development of ARI case management of primary and secondary level in souther Vietnam. Mothers of under five children’s get seminar on pneumonia and ARI before the seminar interview was taken about practice and attitude and two months after the seminar. The spread of knowledge, attitude and practice was measured by random interviews of the mothers six month later. In the interviews information on social condition was obtained. The mothers KAP risen by 25% two months after attending the seminar. A further increase of KAP by 5-10% with in the untrained groups appears in the survey 4-6 month later. It was not [possible to obtain reliable statistics on morbidity or mortality of ARI in the project area.

 **Edwin GE (2010)** conducted aquasi-experimental study in Tricky regarding planned teaching program on knowledge and practice of acute respiratory infections among mothers of under five children in a specialty hospital. The sample of the study was 60 mothers of children with acute respiratory infection selected by non-probability convenient sampling. The tool used was structured knowledge questionnaire. Findings of the study showed that most of the samples had inadequate knowledge regarding acute respiratory infection during pre-test, the unfavorable attitude of mothers was found to be reduced after planned teaching program. The level of knowledge and practice improved after planned teaching program. [ p value is < 0.05].

 **M.S. Ramaiah(2010)** a pre-experimental study was carried out in the field practice area of Medical College Bangalore, Karnataka to assess the impact of educational intervention on the knowledge of mothers of under five children on home management of respiratory diseases. Sample of 225 mothers were included in the study. The study was conducted in 3 stages. Stage I-initial knowledge, attitude and practice of mothers were assessed. Stage II-one to one educational intervention was conducted and supported by audiovisual aids and live demonstration. Stage III-included post intervention knowledge, attitude and practice after 2 months and 2 years. After the educational intervention, there was significant improvement on knowledge of mothers regarding definition of respiratory diseases , signs of respiratory diseases , awareness respiratory diseases , seeking health care and rational drug therapy respiratory diseases during . McNemar test was used to find out the change in knowledge before and after the educational intervention. The overall knowledge scores improved significantly after 2 months as well as 2 years of the educational intervention. Though the proportion of mothers retaining the knowledge at the end of 2 years dropped, yet there was significant improvement when compared to the baseline study.

  **Tupasi TE, Natividad JN(2009)** a study was designed to determine the effect of the health education program in terms of changes in mothers' knowledge, practices and beliefs using Health Belief Model, and to determine the respiratory infection and pneumonia in children of the target group before and after the program. The sample size was 200 respiratory infection children aged 6-24 months and their mothers, 100 of them were randomly assigned to face-to-face intervention program (experimental group) (I), the other 100 were the control group (II). Only 16% of mothers of group I and 18% of mothers of group II got satisfactory level of knowledge. After the conduction of health education program, the mothers' knowledge was significantly increased among group I, while almost there was no change of the knowledge's level among group II. Only 28% of mothers of group I and 21% of those of group II had good hygienic practice. After the program, 74% of mothers in-group I showed good hygienic practice. There were highly significant increases in the levels of knowledge is improved to mothers of group I after the program, while the increases were not significant in-group II.

 **Irwin Rosenstock (2008)** study conducted on maternal knowledge attitude and practices regarding childhood acute respiratory infections in Kumasi, Ghana. 143 women traders were interviewed in open-air market in Kumasi, Ghana who had at least one child aged less than five years. The study showed that 73.4% had a child or children who had suffered from cough, fever within the last 6 months. 73.4% said that cold as a direct cause of cough. Many women said worm infestation for causing cough and fever (21%), and constipation for causing cough (25.9%). None mentioned pathogens as cause of cough and fever. None said that good ventilation and avoidance of overcrowding prevent cough and fever. If there are more serious symptoms the mothers are more likely to seek treatment of a health care facilities ( e .g cough only 0.7%; cough with fever 6.3%; cough, fever and anorexia 30%; cough, fever and lethargy 57.3%). Honey and cough syrup were often used to treat cough and fever but some herbal and home care therapies had potentially harmful effects for example 25.9% said that they used castor oil and enema to prevent ARI. The women had an acceptable knowledge score on severity of symptoms. These findings indicate need for health education programme on domiciliary management and prevention of URTI targeting mother of children aged less than five years.

 **Kauchali S, Rollins N(2008)**a study conducted on maternal knowledge attitude and practices regarding childhood acute respiratory infections in Kumasi, Ghana. 143 women traders were interviewed in open-air market in Kumasi, Ghana who had at least one child aged less than five years. The study showed that 73.4% had a child or children who had suffered from cough, fever within the last 6 months. 73.4% said that cold as a direct cause of cough. Many women said worm infestation for causing cough and fever (21%), and constipation for causing cough (25.9%). None mentioned pathogens as cause of cough and fever. None said that good ventilation and avoidance of overcrowding prevent cough and fever. If there are more serious symptoms the mothers are more likely to seek treatment of a health care facilities ( e .g cough only 0.7%; cough with fever 6.3%; cough, fever and anorexia 30%; cough, fever and lethargy 57.3%). Honey and cough syrup were often used to treat cough and fever but some herbal and home care therapies had potentially harmful effects for example 25.9% said that they used castor oil and enema to prevent ARI. The women had an acceptable knowledge score on severity of symptoms. These findings indicate need for health education programme on domiciliary management and prevention of URTI targeting mother of children aged less than five years.

 **Ericson Rimple (2008)** conducted a study to assess the effectiveness of structured teaching programme on prevention and management of pneumonia in children among mothers. For final study purposive sampling was done to obtain a sample of 60 mothers- 30 in experimental and 30 in control group. The purpose of study was explained to them and confidentiality was assured. Pre-test was taken from both control and experimental group. Then self-structured teaching was given to experimental group with the help of lesson plan and Audio Visual aids. After 72 hours of teaching post test was taken from both experimental and control group. The data gathered were analyzed by calculating mean, mean percentage, SD and't’ test. Chi square was calculated to match the variables. Results of the study proved that teaching programmer was highly effective in enhancing the knowledge of mothers on prevention and management of pneumonia in children which will help them in child rearing, thereby reducing child mortality and morbidity.

 **Metilda.S.(2008)**conducted a pre-experimental study in Mangalore on effectiveness of planned teaching program on prevention of pneumonia among mothers of children having ARI in a selected hospital at Mangalore Karnataka. The sample of the study was 60 mothers of under five children admitted with ARI selected by non-probability convenient sampling. The tool used was structured knowledge questionnaire. Findings of the study showed that >75% had adequate knowledge, 50-75% had moderate knowledge, and <50% had inadequate knowledge. [p value < 0.001]

**CHAPTER-III**

**RESEARCH METHODOLOGY**

 The chapter describes the methodology followed to assess the effectiveness of structured teaching programme on prevention of pneumonia among mothers of under five children with acute respiratory tract infection at selected hospitals, in karimnagar, Telangana.

 This phase of study includes research approach, design, variables, setting of the study, population, sample size, sampling technique, criteria for sample selection, development and description of tool, description of intervention, pilot study, and procedure for data collection and plan for data analysis.

**RESEARCH APPROACH**

Evaluative research approach was used for this present study. It helps to explain the effect of the independent variables on the dependent variables.

**RESEARCH DESIGN**

Pre experimental design (one group pre-test, post-test) was used for the present study.

|  |
| --- |
|  **o1x o2** |

**Key:**

O1-Level of knowledge before structured teaching programme

X-Structured teaching programme

O2-Level of knowledge after structured teaching programme.

**VARIABLES**

**Independent variables**

 The independent variables selected for the present study is structured teaching programme.

**Dependent variables**

 The dependent variables selected for the present study is knowledge of mothers of under five children on prevention of pneumonia.

**SETTING OF THE STUDY**

The study was conducted at selected hospitals in Karimnagar.

**POPULATION**

 The study population consists of mothers of under five children with acute respiratory tract infection at selected hospitals in Karimnagar.

**SAMPLE SIZE**

 The sample size for the study is 30 mothers of under five children with acute respiratory tract infection.

**SAMPLING TECHINIQUE**

 Non-probability purposive sampling technique was used for the selection of the sample for this study.

**CRITERIA FOR SAMPLE SELECTION**

**Inclusion criteria**

* Mothers who are having under five children with acute respiratory tract infection.
* Mothers who can read and understand Telugu.

**Exclusion criteria**

* Mothers who are not willing to participate in the study.
* Mothers who are unavailable at the time of the data collection.

**DEVELOPMENT AND DISCRIPTION OF THE TOOL:**

 The tool is developed with the help of extensive review of literature from various nursing experts and medical experts, The structured teaching questionnaires is in both regional language Telugu and English . It consists of two sections.

**Section A and Section B**

**Section A**: Demographic variables such as age, religion, educational qualification of mother, occupation, monthly income, type of family, number of children, history of previous hospitalization and source of information.

**Section B**: Structured questionnaires consist of 30 multiple choice questions and each question has 4 choices, each correct response carries one mark and wrong response carries zero mark.

**DESCRIPTION OF THE INTRVENTION:**

Structured teaching plan is guide for the teacher because it covers the topic comprehensively with proper sequence of points and without missing any steps in preparing the teaching plan. Structured teaching programme includes:

**Preliminary information of the group:**

A structured questionnaire was used to assess the knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.

**Validity of the content:**

The content was validated by consulting experts in the field of Child Health Nursing department. The major recommendations and suggestions are accepted to modify the teaching plan.

**Method of instruction:**

The method of teaching instruction was lecture cum discussion with use of flash cards.

**PILOT STUDY :**

The Pilot study was conducted among 6 mothers of under five children have been selected based on the sample criteria. pre test was given initially which was allowed by Structured Teaching Programme on 2-2-2015 and The post test was conducted on 9-2-2015.The main objective of the study was to ensure reliability of the questionnaire schedule found out by split of method 0.8 the reliability of the tool is satisfactory.

 **RELIABILITY:**

The reliability of the questionnaire was tested by Spearman Browns Split Half Method. The correlation co-efficient (r) value was calculated the "r" value obtained was 0.8 .The questionnaire was found statistically reliable.

**PROCEDURE FOR DATA COLLECTION**

Data was collected from the mothers of under five children after obtaining a formal written permission from the hospital administrator. Each person was assured for data collected from them, was utilized only for the purpose of study and was kept confidential. The data collection was done from 01-03-2015 to 31-03-2015. Each sample has taken 45 minutes . Pretest was conducted through a Structured questionnaire using interview technique. The Structured teaching programme on prevention of pneumonia among mothers of under five children was given to the mothers on same day itself . After one week Post test was conducted hence the mothers have gain knowledge regarding prevention of pneumonia.

**PLAN FOR DATA ANALYSIS**

Descriptive and inferential statistics was used to analyze the collected data.

**Section 1 -** Demographic data was analyzed by using frequency and percentage distribution.

**Section 2** - Distribution of respondents or samples according to pre-test and post-test knowledge score was analyzed by mean and standard deviation.

**Section 3**-Effectiveness of structured teaching programme on prevention of pneumonia was analyzed by paired ‘t’ test.

**Section 4**-Association of post-test knowledge score on prevention of pneumonia among mothers of under five children with acute respiratory tract infection with selected demographic variable was analyzed by chi-square test.

**EPILOUGE:**

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

**CHAPTER – IV**

**ANALYSIS AND INTERPRETATION**

 This chapter deals with analysis and interpretation of the data collected for the present study. Data was collected from 30 mothers of under five children Analysis and interpretation was done using descriptive and inferential statistics to meet the objectives of the study.

**Objectives of the study were to**

* assess the level of knowledge regarding prevention of pneumonia before and after the structured teaching programme among mothers of under five children with acute respiratory tract infection.
* determine the effectiveness of structured teaching programme on prevention of pneumonia among mothers of under five children with acute respiratory tract infection.
* associate the post test knowledge score regarding mothers of under five children with acute respiratory tract infection with selected demographic variables.

 The data was entered in the master sheet for analysis and interpretation, descriptive and inferential statistical procedures such as frequency, percentages, mean, standard deviation, paired ‘t’ test and chi-square test were used.

 The data is organized, analyzed and presented in followed section

**Section-I**: the demographic data was analyzed by using frequency and percentage.

**Section-II**: distribution of respondents or samples according to pre- test and post-test

 score was analyzed by mean and standard deviation.

**Section**–**III:** effectiveness of structured teaching programme was analyzed by paired ‘t’test.

**Section-IV**: association of post-test knowledge score on prevention of pneumonia among mothers of under five children with acute respiratory tract infection with selected demographic variable was analyzed by chi-square test.

 **Section-I**

**Table – 1 : the demographic data was analyzed by using frequency and percentage regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.**

 **n=30**

|  |  |  |  |
| --- | --- | --- | --- |
| **S No**  | **Variables** | **Frequency** | **Percentage** |
| 1 | **Age**a. below 18 yearsb. 18-23 yearsc. 24 -29 yearsd)above 30 years | 08193 | 026.763.310 |
| **2** | **Religion**a. Christianb Hinduc. Muslimd. Others | 12810 | 3.3393.43.30 |
| **3** | **Education of mother**a. Illiterateb. Primary educationc. Intermediated. Graduate | 018102 | 06033.46.66 |
| **4** | **Occupational status of mother**a. Daily wagesb. Home makerc. Professional workerd. Entrepreneur | 32700 | 109000 |
| **5** | **Monthly income of family**a. Rs/5000b. Rs/ 6000-7000c. Rs/ 8000-9000d. Rs/ 10000 above | 73182 | 23.310606.77 |
| **6** | **Type of family**a. Nuclear familyb. Joint family | 2010 | 66.533.4 |
| **7** | **Number of children**a. One childb. Two childrenc. Three children d. Four and above | 21630 | 7020100 |
| **8** | **History of previous hospitalization**a. Yesb. No | 426 | 13.386.7 |
| **9** | Source of informationa. Mass mediab. Televisionc.Radiod.Other | 13026 | 3.3310086.7 |

 According to age of mother (0%) below 18years of age,(26.7%) 18-23 years of age,(63.3%) 24-29 years of age,(10%) above 30 years of age.

With regard to religion (3.33%) were christian, (93.4%) were hindhu and (3.3%) were muslims, (0%) were others.

 According to education of mother(0%)Illitrate,(60%)Primary education, (33.4%) Intermediate, (6.66%) Graduate.

 While considering Occupational status of mother (10%) daily wages,(90%) home

 maker,(0%) professional worker ,(0%) entrepreneur.

 On the basis of monthly income of the family ( 23.3%) RS/50000, ( 10%) were Rs/ 6000-7000 , (60%) were Rs/ 8000-9000 and ( 6.77%) were Rs/ 10000 above .

 On the basis of type of family (66.5%) Nuclear family, (33.4%) , ( 33.3%) joint family .

 While considering number of children (70%)one child,(20%)two children,(10%)three children,(0%) four and above.

 On basis of history of previous hospitalization of child (13.3%)yes,(86.7%)no.

 On the basis of awareness about pneumonia (3.33%) were through massmedia (10%)television,(0%)radio,(86.7%)other sources .

**FIGURE NO : 3 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to age in years.**

**FIGURE NO : 4 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to religion.**

 **FIGURE NO : 5 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to education of mother.**

**FIGURE NO : 6 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children acute respiratory tract infection according to occupational status of mother.**

**FIGURE NO : 7 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to family income.**

**FIGURE NO : 8 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to type of family.**

**FIGURE NO : 9 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to number of children.**

**FIGURE NO : 10 Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to history of previous**

**FIGURE NO: 11 frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to source of information.**

 **Section-I**

 **PART-I**

**Table-2:** Frequency and percentage distribution on prevention of pneumonia among mothers of under five children with acute respiratory tract infection according to their pre test knowledge score.

 n = 30

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No .** | **Level of Knowledge Score** | **Frequency** | **Percentage** |
| 1 | Below Average (1-10) | 20 | 66.6 |
| 2 | Average (11-20) |  10 | 33.3 |
| 3 | Above Average (21-30) | - | 0 |

 The above table shows that 33.3% of mothers have average knowledge and 66.6% of mothers have below average knowledge and none of mothers have above average knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.

**Figure NO: 12 frequency and percentage distribution of pre test knowledge on prevention of pneumonia among mothers of under five children with acute respiratory tract infection.**

 PART-II

**Table –3:** Frequency and percentage distribution on prevention of pneumonia among mothers of under five children according to their post test knowledge score in children with acute respiratory tract infection..

 n = 30

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Level of knowledge** | **Frequency** | **Percentage** |
| 1 | Below Average (1-10)  | - | - |
| 2 | Average (11-20) | 25 | 83.3 |
| 3 | Above Average (21-30) | 5 | 16.7 |

 The above table shows that 83.3% of mothers have average knowledge and 16.7% of mothers have above average knowledge and none of mothers have below average knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.

**Figure NO:13 frequency and percentage distribution of post test knowledge on prevention of pneumonia among mothers of under five children with acute respiratory tract infection.**

**Section – III**

**Table – 4:**Comparison of pre test and post test score of standard deviation and frequency to determine the effectiveness of structured teaching programme regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection.

 **n = 30**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameters** | **Time interval** | **No. of subjects** | **Mean** | **Standard Deviation** | **t value** | **Critical value**  |
| Knowledge regarding prevention of pneumonia | Pre test | 30 | 8.2 | 2.37 | 12.7 | 0.25\* |
| Post test | 30 | 21.03 | 2.50 |

 \* = Significant

 The above table shows that the mean of knowledge score during pre test was 8.2 and standard deviation 2.37 where as during post test it was 25.62 and standard deviation 3.77. This difference of knowledge score is found to statistically significant.

 **FIGURE NO —Percentage distribution of among mothers of under five children with acute respiratory tract infection according to the pre test and post test knowledge score on prevention of pneumonia.**

  **Section – IV**

**Table – 5:**Association between post test knowledge regarding prevention of pneumonia among mothers of under five children with acute respiratory tract infection in selected demographic variable.

**n =30**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Variable** | **Category** | **Knowledge Score**  | **Chi-Square Value** | **df** | **Critical Value** |
| **1-10%****Below Avg.** | **11-20%****Avg.** | **21-30%****Above Avg.** |
| 1 | Age | a)     Below 18 yearsb)     19-23Yearsc)     24-29 Yearsd) Above 30 years | 000 | 11160 | 2721 | 13.3\* | 6 | 12.7 |
| 2 | Religion | a)    Christianb)     Hinduc)     Muslimd)    Other  | 0000 | 9540 | 5250 | 10.37\* | 4 | 12.7 |
| 3 | Educational qualification | a)  Illiterateb)  Primacy educationc)  Intermediated)  Graduate | 0000 | 013102 | 0500 | 12.59\* | 6 | 12.7 |
| 4 | Occupational status | a)Daily wagesb) Home makerc) Professional workerd) Entrepreneur | 0000 | 12400 | 2300 | 3.84NS | 1 | 12.7 |
| 5 | Monthly income | a) RS 5000b) RS 6000-7000 C) RS 8000-9000d) RS Above 10,000 | 0000 | 62152 | 1130 | 7.81NS | 3 | 12.7 |
| 6 |  Type  of family | a)     Nuclear familyb)     joint family | 00 | 109 | 5 6 | 6.1NS | 2 | 12.7 |
| 7 | Number of children | a)   one childb)    two childrenc)    three childrend)    four and above |  0000 |  1762O |  4010 | 5.99NS | 2 | 12.7 |
| 8 | History of previous hospitalisation |  a) Yes b) No | 00 | 322 | 14 |  3.84NS | 1 | 12.7 |
| 9 | Source of information | a) mass mediab) televisionc) Radiod) Other | 0000 | 01800 | 2901 | 13.21\* | 6 | 12.7 |

 \* Significant

 NS = Non Significant.

 **Table no-5** shows that demographic variables such as Age, Religion, Education and Sources of information of mothers of under five children is have on prevention of pneumonia had significant association with knowledge score as the chi-square value is greater than critical value. There is no significant association between knowledge score and other demographic variables such as Occupational status, Income of the family, Type of family, Number of children , History of previous hospitalisation.

**CHAPTER – V**

**DISCUSSION**

 The present study was conducted to evaluate the effectiveness of structured teaching programme on knowledge regarding prevention of pneumonia among mothers of under five children. In order to achieve the objectives of the study one group pretest and post test design with evaluative research approach was adapted. Non probability purposive sampling technique was used to select the samples. The data was collected from 30 mothers of under five children before and after administration of the s programme by using structured questionnaire. The findings of the study have been discussed with the reference to objectives and hypothesis.

 **Distribution of Demographic Variables**

 According to age of mother (0%) below 18years of age,(26.7%) 18-23 years of age,(63.3%) 24-29 years of age,(10%) above 30 years of age.

With regard to religion (3.33%) were christian, (93.4%) were hindhu and (33.3%) were muslims, (0%) were others.

 According to education of mother (0%) Illiterate,(60%)Primary education,(33.4%) Intermediate,(6.66%) Graduate

 While considering Occupational status of mother (10%) daily wages,(90%) home maker,(0%) professional worker ,(0%) entrepreneur.

On the basis of monthly income of the family ( 23.3%) RS/50000, ( 10%) were Rs/ 6000-7000 , (60%) were Rs/ 8000-9000 and ( 6.77%) were Rs/ 10000 above .

 On the basis of type of family (66.5%) Nuclear family, (33.4%) , ( 33.3%) joint family.

While considering number of children (70%)one child,(20%)two children,(10%)three children,(0%) four and above.

 On basis of history of previous hospitalization of child (13.3%)yes,(86.7%)no.

 On the basis of awareness about pneumonia (3.33%) were through mass media (10%)television,(0%)radio,(86.7%)other sources .

 **1. The first objective was to assess the pre test knowledge on prevention of pneumonia among mothers of under five children with acute respiratory tract infection.**

 In the present study findings revealed that the mean of knowledge score in pretest 66.6% of mothers of under five children had below average knowledge and 33.3% of mothers of under five children had average knowledge score whereas in post test 83.3% of mothers of under five children had average knowledge and 16.7% of mothers of under five children had above average knowledge.

 **Nilanjan K.m.(2010)** a study conducted in Baringo District Kenya on “Breast feeding and reported morbidity during infancy”. Finding from the Southampton women’s survey. In a prospective birth cohort study assessed the relationship between the duration of breast feeding and the prevalence of respiratory tract infections. During the first year of life in 1764 infants. 81% of the infants were breastfed initially, and 25% were breastfed upto 6 months. There were graded decreases in the prevalence of respiratory symptoms between birth and 6 months as breastfeeding duration increased. Data provides strong support for a protective role of breast feeding against respiratory infections in infancy.

**2 . The second objective was to assess the effectiveness of structured teaching programme on**

 **prevention of pneumonia among under five children with acute respiratory tract infection.**

 The study revealed that the knowledge score in pre test 8.2 and standard deviation 2.37 and post test mean 21.03, standard deviation 2.50. The difference is level of knowledge is found to statistically significant by calculating t value which was found to be 12.7 which is more than the table value p = 0.2155. Hence the hypothesis accepted and stated that there is significant relationship between the level of knowledge prior to and after the intervention.

  **Srikumari and Spurling G. K (2013)** a descriptive study was conducted in Dharwad on the effectiveness of planned teaching programme on prevention of pneumonia among mothers of children having acute respiratory infection. One group pre-test post-test design was adopted to conduct the study and sample taken were 60 mothers of under-five children. Structured questionnaire was used in this study. The pre-test scores shows that 14 mothers had (23.33%) inadequate level of knowledge and 46 mothers had (76.67%) moderate level of knowledge and the post-test scores after the planned teaching programme shows that 59 mothers had (98.33%) adequate knowledge and only 1.67% with moderate level of knowledge. This shows that there is significant difference in the pre-test and post-test level of knowledge and it is significant at p<0.001. This study concludes that planned teaching programme is effective in enhancing knowledge of mothers regarding pneumonia and this study conclude that it is the responsibility of health workers to organize such educational programmes in community.

**3.The third objective was to find the association between the post test knowledge on prevention of pneumonia among mother’s of under five children with acute respiratory tract infection in selected socio demographic variables.**

The present study findings reveals that there was a significant association between level of knowledge of mothers of under five children and demographic variables such as, age, religion, education, and source of information0.25 level and there was no significant association between demographic variables such as Occupational status, Income of the family ,Type of family, Number of children, History of previous hospitalisation.

  **Harkness.GA.(2012)**conducted on cross sectional study to know the relationship between the demographic variables such as age, religion, occupation, history of previous hospitalization and source of information in mothers of under five children and to understand the relationship better in India. Annual National health centre Delhi shown that the health report and other epidemiological studies were included and statistically analyzed. the results demonstrated that their is a significant correlation between their religion, occupation, history of previous hospitalization has been associated. The study can be valuable for provision of appropriate strategies focused on age, religion, history of previous hospitalization for creating awareness regarding prevention of pneumonia.

**EPILOGUE:**

This chapterdeals with general discussion of the problem and its analysis of data and results to each objective.

**CHAPTER – VI**

**SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATIONS AND**

**RECOMMENDATIONS**

 With the birth of the child man may calculate that god is still hopeful about the world he created. But healthy survival of the children is threatened in every moment . Child health problems are shocking and alarming throughout the world , especially in developing countries . Though there are free access of preventive medical care much efforts to be made to educate the mothers regarding risks of respiratory diseases and also identify the problems of respiratory infections during respiratory problems.

 Expert and empathetic approach is essential to minimize these problems and to reduce the inexcusable causes of mortality and morbidity among under five children and also assuring that the adequate knowledge of influences their respiratory problems among under five children health and prevent diseases.

**SUMMARY:**

 The present study was undertaken to evaluate the effectiveness of structured teaching programme on prevention of pneumonia among mothers of under five children with acute respiratory tract infections.

**Objectives of the study were to**

* assess the level of knowledge regarding prevention of pneumonia before and after the structured teaching programme among mothers of under five children with acute respiratory tract infection.
* determine the effectiveness of structured teaching programme on prevention of pneumonia among mothers of under five children with acute respiratory tract infection.
* associate the post test knowledge score regarding mothers of under five children with acute respiratory tract infection with selected demographic variables.

 **HYPOTHESIS:**

There was a significant difference between pretest and post test knowledge. An extensive review of related literature of the study was done, which helped the investigator to identify, critically analyzed and report an existing information of the problem selected for the study design the methodology and tool for data collection.

 **FINDINGS OF THE STUDY:**

* 30 mothers of under five children assessed regarding knowledge on pneumonia its prevention among mothers of under five children with acute respiratory tract infection.
* In the present study findings revealed that the mean of knowledge score in pretest 66.6% of mothers of under five children had below average knowledge and 33.3% of mothers of under five children had average knowledge score whereas in post test 83.3% of mothers of under five children had average knowledge and 16.7% of had above average knowledge.
* The mean knowledge score during the pre test was 8.2 and standard deviation 2.37 where as during the post test it was 21.03 and standard deviation 2.50. This difference of knowledge score is found statistically significant.
* The obtained ‘t’ value for over all knowledge score is significant.
* There is an association knowledge regarding prevention of pneumonia with demographic variable such as age, religion, education, source of information.

 **CONCLUSION:**

Children are our future. Their energy and hope inspires the older generation. Acute Respiratory Tract Infection (ARI) in children less than five years old is the leading cause of childhood mortality in the world. Acute Respiratory Infection is the most common cause of hospitalization and death in children living in developing countries. The statistics show that respiratory Infections in infants and children is a major problem that accounts for a large share of childhood mortality and morbidity.

**IMPLICATIONS:**

The investigator has drawn the following implication from the studies which are vital concern for nursing education, nursing service, nursing administration and nursing research.

**Nursing Education:**

 The nurse educator should reorient the nursing curriculum to gain more knowledge on prevention of pneumonia. Health programmes and conference can be conducted to nurses to provide quality care in community and hospitals. There is increased need for the nurse educations to highlight the importance of prevention of pneumonia to learners. So that mothers of under five children can be benefited.

**Nursing service:**

 Nurses should have the advance knowledge on prevention of pneumonia and conducting health programme to get awareness regarding prevention of pneumonia.

**Nursing Administration:**

 There is an increased need for periodical in service educational programme for the nurse on prevention of pneumonia. The nurse administer can encourage the students to improve knowledge on pneumonia.

**Nursing research:**

* There is need to improve knowledge regarding pneumonia and its prevention as there is increased incidence of deaths.
* Research can be done an various aspects like effectiveness of knowledge , management. and prevention of pneumonia

**LIMITATIONS:**

* Present study was limited to 30 mothers of under five children.
* The sample was only from a selected hospitals they restricting generalizing of the study.

**RECOMMENDATIONS:**

Based on the findings of the study the following recommendations are made.

* Comparative studies can be conducted on rural and urban mothers regarding prevention of pneumonia.
* The same study can be conducted with control group.
* A protocol can be established regarding prevention of pneumonia.

**EPILOGUE:**

This chapter dealt with summary, conclusion, implications, limitations and recommendations.

 **BIBLIOGRAPHY**

 **BOOKS**:

1.Acharya D, Prasanna KS, Nair S, Rao RS. ARI in children a community based longitudinal study inIndia. Indian Journal of Public Health 2003 Jan/Mar, 47 (1); 7-13 -307.

2.Agarwal DK, Bhatia BD, Agarwal KN. Simple Approach to Acute Respiratory Infection in RuralUnder Five Children. Indian Paediatrics. [online] 1993[cited 2008 Nov 20]; 30(5):629-635.

3.Anita P, Rama C, Lata K, Kabra1 SK. Acute Lower Respiratory Tract Infection due to ChlamydiaSpecies in Children Under Five Years of Age. Indian J Chest Dis Allied Sci [Online] 2005[cited 20thNov 2008]; 47: 97-101.

4.Broor S., et al. Risk factors for severe acute lower reparatory tract infection in under five children.Indian pediatrics [Online] 2001 Dec[cited 2008 Nov 20];38(12):1361-9.

5.Galvez CA, Modeste N, Lee JW, Betancourt H, Wilkins RL, Peruvian Mothers Knowledge andRecognition of pneumonia in children Under five years of age, Rev Panam Salud Publication

2002 Feb; 11(2) Universidad Peruana Union ,Lima, Peru Pubmed 99-108.

6.Hildenwall H, Rutebemberwa E, Nsabagasani X, Pariyo G, Tomson G, Peterson S Local illnessconcepts-Implication for management of Childhood pneumonia in eastern Uganda Acta Trop 2007mar;101(3) , Epub 2007 Feb 15 Div International Health(IHCAR), Karolinska Institute, Nobles vag9,S- 171 77 stockholm Sweden, Helena pubmed 217-24 .

7.Koch A, et al. Population based study of ARI in children Greenland, Emergency infections Diseases.2003 June; 8(6): p. 586-593.

8.M.R.Savitha, S.B.Nandeeshwara, M.J.Pradeep Kumar, Farhan-ul-haque, C.K.Raju. Indian Journalof Pediatrics; vol 74 May 2007.

9.Nilanjan KM. Longitudinal study on ARI among Rural Under fives. Indian Journal of CommunityMedicine [online] 2001 Jan [cited 2008 Nov 20]; 26(1): 124-128.

10.Park K. Textbook of preventive and social medicine. 17th ed. Jabalpur: Banarasidas bhanot;2005.p.81.5.Wongs V. Essentials of pediatric nursing. 7th ed. St Louis: Housenberry MJ; 2005.p. 788-91

11.Shasikala T. Effectiveness of structured teaching programme on acute respiratory tract infection.Nightingale Times Nursing 2008 June;p.12-15.

12.Savita MR, et al. Modifiable risk factors for acute lower respiratory tract infections. Indian Journal ofPediatrics 2007 May; 74(5): 477-82.

13.Simiyu DE, Wafula EM, Nduati RW Mothers Knowledge Attitude and Practices regarding acuterespiratory infections in children’s in Baringo District Kenya East Afr Med J 2003 June;80(6)Department of Paediatrics and Child Health, College of Health Sciences, University of Nairobi,P.O. Box19676 Nairobi, Kenya pubmed 303-7.

14.Stekelenburg J, Kashumba E, Wolffers I , Factor contributing to high mortality due to pneumonia among under fives in Kalabo District, Zambia Trop Med Int Health 2002 oct;7(10)LeeuwardenMedical Center , Department of Obstetrics and Gynaecology, the Netherland.jelle.stekelenburg@wanadoo.nl pubmed 886-93.

15.Muhe L, Mothers perceptions of signs and symptoms of acute respiratory infections in their

children and their assessment of severity in an urban community of Ethiopia, Ann Trop Paediatr

1996 June;16(2), Department of Paediatrics and Child Health , Ethio-Swedish Children’s

Hospital, Addis Ababa , Ethiopia Pubmed 129-35.

16.Bolam A, Manandhar DS, Shreshta P, Ellis M, Costello AM The effect of post natal health

education for mothers on infant care and Family planning practices in Nepal; a randomized

controlled trial, BMJ 1998 Mar 14;316(7134) Center for International Child Health , Institute of

Child Health , London Pubmed 805-11.

17.Misra.S, Kumar. H, Sharma.D, How do mothers recognize and treat pneumonia at home Indianpediatr January31 (1) 1994 Department of Pediatrics Kalawati Saran Children’s hospital, NewDelhi pubmed 15-8.20.Anita P, Rama C, Lata K, Kabra1 SK. Acute Lower Respiratory Tract Infection due to ChlamydiaSpecies in Children Under Five Years of Age. Indian J Chest Dis Allied Sci [Online] 2005[cited20th Nov 2008]; 47: 97-10.

18.Stekelenburg J, Kashumba E, Wolffers I , Factor contributing to high mortality due to pneumoniaamong under fives in Kalabo District, Zambia Trop Med Int Health 2002 oct;7(10) , 19.LeeuwardenMedical Center Department of Obstetrics and Gynaecology, the Netherland pubmed 886-93.22.Mitra Nilanjan Kumar. A longitudinal study on ARI among rural under fives. Indian journal of community medicine 2001 Jan-Mar;26(1):8-11.

20.Wendy W., James AT., Ann S, Noel S, Leanna J. Echinacea purpurea for Prevention of Upper 21.Respiratory Tract Infections in Children. The Journal of Alternative and Complementary Medicine[Online] 2005 [cited 2008 Nov 20]; 11(6): 1021-26.

**JOURNALS**

1. Akilandeswari – A study to assess the causes of acute lower respiratory infection (2006) ‘ Indian journal of community medicine’
2. Biswas – mothers of under five children regarding control and prevention. ‘ Indian journal of pediatrics’ (1999) March 8th, 10th vol-3
3. Cleome Angelina Roses*,* Study on knowledge regarding acute respiratory infection among

 mothers of under five children. (2000).

1. Dharr. G.M.Bbani*,* A Study on health education regarding acute respiratory inspection.
2. Dollman.W.B., A community based intervention to reduce antibiotic use for upper respiratory tract infections in regional south Australia. Med.J.Aust.Jun’ (2005), 20:182 (12):617-20
3. Elsevier*,* study on acute respiratory infection, (2002),
4. Etiler,Study on acute respiratory infection, (2002).
5. Geralad*.E.D* Study on effectiveness of disease and inadequate nutrition in acute respiratory infection. (1998).
6. Gryczyeska, Kobas and krzewska – A study to assess the knowledge regarding causes of upper respiratory infection (1999) ( Indian journal of community medicine) Volume -4 Page Number 33-34

10.Hoberman, A study to assess the knowledge regarding signs and symptoms of acute respiratory

 infection, (2002).

11.Kara K. and Vera IRC*.,* Study to assess the level of knowledge regarding prevention of acute

 respiratory infection. (1999).

12.Kim,A Study to determine the effectiveness of knowledge, attitude and practice of acute

 respiratory infection in Korean children. (2000).

13.Neemisha, A study on acute respiratory infection, (2001).

14.Niscimento, A study on incidence of acute respiratory infection. (2001).

15.Paul, A study on knowledge regarding signs and symptoms of acute respiratory infection,

 (1999).

16.Shaj *D.K* – Study on lower respiratory infection among mothers of under five children,Indian

 journal of pediatrics’ (1999) 22(1) Page No: 48-50

17.Sherene G. Edwin – A study on knowledge, attitude, practice of acute respiratory infection

 among mothers of under five children. (Nightingale Nursing times’- A window for health in

 action, August (2007) Vol-3 issues Page No: 21-23.

18.SimiyuD.E Wafula.E.M., Noluati. R.W., Mothers knowledge, attitudes and practices regarding

 acute respiratory infections in children in Baringo District, Kenya, Department of Pediatrics

 and Child Health, (2003), 80 (6); 303-7

19.Spurling. G.K., Delma*r. C.B.,*  Delayed antibiotics for symptoms and complications of

 respiratory infections. Cochrane Database Syst. Rev. Oct (2004), 18; (4): CD 004417

20.Srikumari, A study on acute respiratory infection among mothers of under five children.

 IndianJournal of Pediatrics. (2004), V0l.6 (21-22)

21.Subramnani,A study to asses the knowledge regarding home remedial measures of ARI.

 (1999), Indian Journal of peadiatrics.

22.Surgery – A study to assess the knowledge regarding causes of acute respiratory syndrome

 virus (2000) ‘ Indian journal of pediatrics’

23.Surgery – A study to assess the knowledge regarding causes of acute respiratory syndrome

 virus (2000) ‘ Indian journal of pediatrics.

24.UNICEF*,*  A study to evaluate the incidence of acute respiratory infection, (2005).

25.Vincent.D., A study on community acquired respiratory syndrome virus infection. (2001)

26.Verema I.C – A study to assess the knowledge on causes of acute respiratory infection.

 ‘ Indian journal of pedriatrics’ 19th edition (July 2006), Volume:3, 16(12)

27.WHO / UNICEF Indoor air pollution: impact of intervention on acute respiratory infection

 among mothers of under five children (2003).

 **NET REFERENCES**

1. [WWW.google.com](http://WWW.google.com)
2. [WWW.pubmed.com](http://WWW.pubmed.com)
3. <http://www.cat.inist.fr/?aModele=afficheN&cpsidt=3800439>.
4. <http://www.ncbi.nlm.gov/pubmed/2228093>
5. <http://journals.cambridge.org/download>
6. <http://www.orion-group.net/medicaljournal/pdf/270.pdf>.
7. Prevention of pneumonia, [www.view](http://www.view) content/ 40321.html
8. http:jpub health. Oxford journals.org/cgi/reprint/20/2/139.pdf
9. http:5bvp /71/33 /pneumonia.pdf
10. http;//www.health care and management.com/20030615/rural/Shtme