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A Study to Assess the Effectivenes of STP on Knowledge Regarding Prevention of Bronchitis among Mothers with Pre-Schoolers in Selected Hospitals, Bagalkot

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Abstract **Original Research Article**

The research design adopted for the study was pre experimental research design method. The research approach selected for the study was one group pre-test, post-test research approach. Non probability convenient sampling was used for the study. 50 mothers with Pre-schoolers were selected for the study. The tool used for the data collection was structured knowledge questionnaire which has two sections. Section-A provides about socio-demographic data and Section-B deals with the knowledge regarding prevention of bronchitis among mothers with Pre-schoolers. Collected data was analyzed by using descriptive and inferential statistics in terms of frequencies, percentage, mean, standard deviation, chi-square values, correlation co-efficient and 't' test. The higher percent of respondents (42%) found in the age group of 24-29years, 38% of them were secondary education, 36% of them were housewife's, Hindus (68%) is considered as majority group, 42% have monthly income of Rs.10001-15000, 44% have 2 number of children, 24% have previous knowledge on prevention of bronchitis. During pre-test (68%) majority of the mothers with Pre-schoolers were having inadequate level of knowledge regarding prevention of bronchitis. In the post-test all the mothers showed improvement in their knowledge, 90% were having adequate level of knowledge, 10% of them were having moderate level of knowledge and none of them were possessing inadequate level of knowledge. This shows that the planned teaching programme was effective in improving the knowledge of the mothers with Pre-schoolers regarding prevention of bronchitis. The chi-square value of the pre-test level of knowledge were significant at $p<0.05$ level which showed that there was a significant association between educational status, number of children, previous knowledge and source of information regarding prevention of bronchitis. The findings of the study concluded that mothers with Pre-schoolers had inadequate level of knowledge regarding prevention of bronchitis. The structured teaching programme was effective in improving the knowledge of the mothers. The findings of the study concluded that mothers with Pre-schoolers had inadequate knowledge regarding prevention of bronchitis. The STP was highly effective in improving the knowledge of mothers with Pre-schoolers regarding prevention of bronchitis.

Keywords: Bronchitis prevention, Preschool children, Maternal knowledge, Structured teaching program.

INTRODUCTION

"The only love that I really believe in is a mother's love for her children".
-Karl Roger

According to WHO children represent the future and ensuring their healthy growth and development ought to be a prime concern of all societies. Children are vulnerable to malnutrition and infectious diseases, many of which can be effectively prevented or treated [1].

Health is an invaluable part of a human beings life. Without it, people can become uninspired, de-motivated, and unable to thrive for success. Good health favors personal efficiency and contributes to an individual's lifespan and has much to do with happiness and success. But diseases affect people not only

physically, but also emotionally and socially. Diseases can alter one's perspective of life. It can be acute or chronic [1].

Children constitute large sections of the population in India. It is a great challenge to the nation to provide health, education and food to the children below 15 years who are the dependent, unproductive section comprising 40% of the total population of the country (Census 2006). This is the section of population with great potential. "Children are the wealth of tomorrow. Take care of them if your wish to have a strong India, ever ready to meet various chalenges" said Jawaharlal Nehru [2].

The first five years of a child's life are fundamentally important. They are the foundation that shapes children's future health, happiness, growth, development and learning achievement at school, in the family and community, and in life in general [2].

A pre-schooler is a child between the ages of one and three. The pre-schoolers are time of great cognitive, emotional and social development.

Today, there are millions of people suffering from different kinds of respiratory illness that can have a significant effect in the way they live their daily lives. Infections of respiratory tract are the most common human ailment. The respiratory illness are a source of discomfort, disability, and loss of time for most adults, they are a substantial cause of morbidity, and mortality, in young children and the elderly.

Some of the most common illness in pre-schooler is allergies, respiratory disease (asthma, bronchitis, bronchiolitis, and pneumonia) bladder infection, chickenpox, colds, croup, vomiting and diarrhea, ear infection, tummy troubles, urinary tract infection, hand-foot-and-mouth diseases [4].

It has been reported that bronchitis is one of the leading causes of pre-schooler mortality in developing countries and is responsible for 1.9 million deaths annually. Among 42 countries in the world 14–24% of the under-five mortality burden is due to bronchitis and nearly 70% of this mortality occurs in Africa and south East Asia regions [5].

WHO reported more than four million deaths a year from bronchitis in the developing world quarters. Mortality may be greater in developing countries because of low resistance of children due to malnutrition, overcrowding and poor environmental circumstances such as indoor air pollution. In both developed and developing countries 20-30 episodes of bronchitis occur in first five year of life, and about 5-7 episodes of bronchitis per child per year [6].

Bronchitis is one of the major reasons for which children are brought to the hospitals and health facilities. Hospital records from states with high infant mortality rates show that up to 13% of inpatient deaths in pediatric wards are due to bronchitis. The proportion of death due to bronchitis in the community is much higher as many children died at home. The reason for high fatality may be either children are not brought to the hospital or brought too late [7].

Bronchitis is the infection of the bronchus and it is a condition where main air passages to the lungs (bronchi) get inflamed it result into shortness of breath, cough and chest tightness. Yellow or green mucus is brought up due to coughing in bronchitis. The clinical features include running nose, cough, sore throat, difficulty breathing and ear problem. Fever is also common in acute respiratory infection. This condition is triggered by an overly active immune system that attacks harmless foreign substances that enters the body. The immune system identifies the foreign substances as dangerous and release antibodies to fight the substances [2].

Low resource settings their diseases are mainly attributed with exposure to indoor pollution, solid-cooking fuels, poor housing, low nutritional status and sanitary condition. The association of respiratory disorders with geographical region may be relevant with population density, industrial and textile pollutants, and tobacco consumption. The relationship between socio-economic developments, behavioral and environmental factors of these diseases will be premediatated [3].

Bronchitis is the infection of the bronchus and it is a condition where main air passages to the lungs (bronchi) get inflamed it result into shortness of breath, cough and chest tightness. Yellow or green mucus is brought up due to coughing in bronchitis. Coughing brings up a greenish yellow phlegm or sputum. These symptoms may be accompanied by a fever of up to 102°F (38.8°C). Wheezing after coughing is common, sore throat, back and other muscle pains, headache and general malaise (feeling unwell) [8].

Child health is mostly the responsibility of mothers. There-fore the mother's knowledge about child care influences the nature and quality of care that is given to the child. Several studies have revealed that the mother's education has a positive impact on their knowledge and practice in child health matters.

Family members especially the mothers have an important role in preventive aspects and through that health promotion in their children. The mother should have the knowledge about common childhood diseases that will make a significant difference in the prevalence of these diseases affecting the health of the children [6].

NEED FOR THE STUDY

"Education is the development of all those capacities in the individual which will enable him to control his environment and fulfill his possibilities."

- **John Dewey**

As we approached the twenty first century lifestyles throughout the different global regions, are changing rapidly, deeply affecting the working condition, living environmental characteristics of occupational and occupational hazards. In such a milieu it is imperative that every responsible citizen should have sufficient knowledge of rendering first aid to the sick or injured persons till the victims reach the safe hands of qualified personnel [6].

Infections of the respiratory system are the most common reason for children presenting at the doctor´s practice. Almost all infants and younger school children become sick several times a year with bronchitis. In most cases with the beginning of day nursery or nursery school there are an abrupt accumulation and many parents have the feeling that their child is permanently ill. That bronchitis occurs much more frequently in winter than in summer, as everyone knows from personal experience. The cold air outside and the dry heated air indoors, increases the vulnerability of the mucosa for pathogens. Whether the clinical course of bronchitis is uncomplicated or associated with a bronchial obstruction, is partly caused by the genetic predisposition of the child. Depending on family history of bronchial asthma and allergies, the risk may be increased many times over. The health damage due to exposure to tobacco smoke is a major point which should not be underestimated [9].

Total world population is 6.965 billion (2011) in that about 28.2% are pre-schoolers. Total population of India is 1,210,193,422(2011), In that 440 million are children. About 27 million children are born each year in India. But nearly 2 million of them do not live to the age of 5. Respiratory infections are leading cause of child mortality in India about 30% of pre-schoolers affected with respiratory tract infections. In Karnataka total population is 61,095,297(2011) in that 6,855,801(2011) are pre-schoolers. It has been estimated that about 2.2 million deaths occur from respiratory infection throughout the world. According to Registrar Generals published figures, respiratory infections accounts for 13-20% mortality during infancy and childhood in India [10].

We in the 21st century there have been rapid changes in all aspects including lifestyles, working condition, environment and occupation. India is one of the largest developing countries in the world. It constitutes around 15.9% (2011) of children below 6 years of the total population that is nearly about 150 million are children. The future rest on these children's who will become the future citizens and leaders. Care for the children is not only vital in itself but the most important aspects of the health of the community as a whole [11].

Every year 3.9 million young children die due to bronchitis worldwide. It is estimated that Bangladesh, India, Nepal together accounts for 40% of global bronchitis mortality. Allergic bronchitis is a type of respiratory disorder [12]. Bronchitis places a considerable strain on the health budget. In 2002 they were still the leading cause of deaths among all infectious diseases, and they accounted for 3.9 million deaths worldwide and as of 2010 bronchitis caused about 2.8 million deaths down from 3.4 million in 2008 [13].

Over 40% of the global burden of disease attributed to environmental factor falls on children below five years of age, who account for only about 10% world population, 60% of bronchitis worldwide is related to environmental conditions. Bronchitis is a major cause of morbidity & morality in your children worldwide [14].

According to an epidemiological study conducted in Portugal with 4148 children aged ranging from 1 to 6 years revealed that the prevalence of bronchitis in the overall population was 4.9%. According to the global analysis of the data collected Measles, whooping cough, Socio-economic conditions and parental smoking contributed to the increase in the incidence of bronchitis in children.

According to an epidemiology-based study conducted in Austria, France and Switzerland to determine the prevalence of bronchitis and the impact of outdoor (total) and traffic-related air pollution on children, has estimated that Air pollution caused 6% of total mortality or more than 40,000 attributable cases per year. About half of all mortality caused by air pollution was attributed to motorized traffic, accounting also for: more than 25,000 new cases of bronchitis (children) and more than 0.5 million asthma attacks. The overall prevalence of bronchitis was 24% or 210,000 cases (children). The assessment estimates the health impacts of current patterns of air pollution on children. Traffic-related air pollution remains a key target for children's health action in Europe [15].

According to a cross-sectional survey done with a sample size of 9434 to investigate the prevalence of chronic bronchitis among children in China revealed that the prevalence rate of chronic bronchitis among children in rural area was 8.8% of which 12.8%in male and 5.4%in female. The study concluded that there is a high prevalence of bronchitis among children in china [16].

According to a study in India to determine the prevalence and risk factors for chronic bronchitis (CB) it has been estimated that 8.5% of children are presented

with respiratory symptom. The overall prevalence of chronic bronchitis was 3.49%. Household environmental, smoke exposures were associated with increased odds of CB. The national burden of CB was estimated as 14.84 million [17].

According to a study conducted in children between 3 to 4 years of age in Tripura to determine the incidence of bronchitis revealed that the annual attack rate per child was more in urban area than in rural area. Monthly incidence of bronchitis was 23% in urban area and 17.65% in rural area [18].

A study conducted in Chandigarh, Delhi where data was collected from 73605 respondents and were analyzed. The study shows that one or more bronchitic symptoms were present in 4.3-10.5% subjects. Bronchitis was diagnosed in 2.28%, 1.69%, 2.05 and 3.47% respondents respectively at Chandigarh, Delhi. Parental smoking and respiratory infection were associated with increased rate of bronchitis. The overall prevalence of bronchitis was 2.38% [19].

In Delhi among children ageing (3 to 5) years revealed that the overall prevalence of bronchitis was 2.37%. It has also estimated that 2.35% are presented with chest illness. Low socio-economic status and household fuels are also associated with increase odds of bronchitis [20].

Regular and frequent exercise under supervision can deal with pulmonary function to a larger extent. Incentive spirometry and balloon blowing exercises are proved in decreasing breathlessness in people suffering from chronic lung disease can increase exercise tolerance and it strengthens thoracic muscles. Balloon inflation is proved to be cheap and cost-effective method of pulmonary rehabilitation [21].

Child care is mostly the responsibility of mothers. Several studies have revealed that the mothers' education has a positive impact on their knowledge and practice in child health matters. Therefore, the mother's knowledge about child care influences the nature and quality of care that is given to the child. The under five children population accounts about 30 percentages in India. And occurrence of bronchitis is also much higher among the under-five children.

The researcher also had an experience during her clinical and community posting and found that the mothers had poor knowledge about respiratory tract infection (bronchitis), she felt that the study of the effectiveness of structure teaching programmes on knowledge for prevention of bronchitis would provide a baseline date to improve the health practices of mother with pre-schoolers and quality of life amount the children. It will also help reduce the complications arising due to respiratory tract infection.

OBJECTIVES

STATEMENT OF THE PROBLEM

"A STUDY TO ASSESS THE EFFECTIVENES OF STP ON KNOWLEDGE REGARDING PREVENTION OF BRONCHITIS AMONG MOTHERS WITH PRE-SCHOOLERS IN SELECTED HOSPITALS, BAGALKOT."

OBJECTIVES OF THE STUDY

- Assess the existing level of knowledge of mothers with pre-schoolers regarding prevention of bronchitis
- Evaluate the effectiveness of STP on prevention of bronchitis among mothers with pre-schoolers
- Find out the association between pre-test level of knowledge of mothers with pre-schooler and their selected socio-demographic variables.

ASSUMPTION

1. Mothers may have some knowledge regarding prevention of bronchitis.
2. STP may enhance the knowledge of mothers regarding prevention of bronchitis.
3. Socio-demographic variables may influence the knowledge level of mothers regarding prevention of bronchitissss.

HYPOTHESIS

H_1- There is a significant difference between mean pre-test and post-test knowledge scores among mothers regarding prevention of bronchitis.

H_2- There is a significant association between mean pre-test knowledge scores of mothers and their selected socio-demographic variables.

VARIABLES

Variables are an attribute of a person or an object that varies. Variables are often inherent characteristics of research subject.

Dependent variable: Knowledge of mothers with pre-schooler regarding prevention of bronchitis.

Independent variable: Structured teaching programme regarding prevention of bronchitis.

Demographic variable: Characteristics of mothers with pre-schoolers such as Age, religion, educational status, socio economic status, occupational status, type of family, no. of children and source of information regarding prevention of bronchitis.

LIMITATIONS

This study is limited to:

- 4 weeks of data collection
- 50 mothers with pre-schooler

- Selected hospitals, Bagalkot

OPERATIONAL DEFINITIONS

In this study it refers to:

Study: The activity for finding out the improvement of knowledge of mothers regarding prevention of bronchitis with the help of STP.

Assess: Evaluation of desired or intended outcome of the study.

Effectiveness: The changes that have to occur in the knowledge of the mothers with pre-schoolers regarding prevention of bronchitis.

Knowledge: The information of the mothers regarding prevention of bronchitis which is gained through STP.

Structured teaching programme

It refers to systematically planned teaching programme for a group of mothers having 1 to 3 years of children regarding knowledge on prevention of bronchitis.

Mothers: The woman having pre-schooler.

Pre schoolers children: The children between three and five years if age.

Prevention: The measure taken to reduce the incidence and limit the cases of bronchitis among pre-schooler.

Hospital: Health care institution providing patient care and treatment with specialized staff and equipment to the society.

CONCEPTUAL FRAMEWORK

A Conceptual framework is a group of concepts and a set of proportions that spell out the relationship between them. A concept is a term or label used to describe a phenomenon or a group of phenomena. A framework is the conceptual underpinning of the study. A conceptual frame work is a theoretical approach to the study problems that are scientifically based and emphasis the selection arrangement and classification of its concepts [33].

Conceptual framework deals with the abstraction (concepts) that are assembled by virtue of their relevance to a common theme. Conceptual framework is the generation of researcher hypothesis and can provide an important context for scientific research.

Polit and Hungler (1999) states that the conceptual framework is an interrelated concept or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common thing. This is a device that helps to stimulate research and the extension of knowledge by providing both direction and impetus.

The present study is aimed at developing and evaluating the effectiveness of structured teaching programme on knowledge regarding prevention of bronchitis among mothers with pre schoolers children.

In this study, Imogene M. King's goal attainment theory has been selected. The theory is based on the assumption that humans are open systems and are having constant interaction with the environment. The major concepts in this theory of goal attainment are interaction, perception, communication, transaction, role, stress, growth and development, time and space.

The definitions of these concepts are as follows:

Interaction: According to Imogene M. King, each individual brings to an interaction with different set of values, ideas, attitude and perception to exchange. In this study, both the investigator and the mothers with pre-schooler come together for a purpose of improving knowledge regarding prevention of bronchitis.

Perception: According to Imogene M. King, it is the primary features of the personal system because it influence all the other behaviors, refers to a person's representation of reality. In this study, it means that the mothers with pre-schooler are consistent with different demographic variables such as Age, religion, type of family, educational status, occupation and previous exposure to prevention of bronchitis.

Transaction: According to Imogene M. King, two individuals mutually identify goals and the means to achieve it. They reach an agreement about how to attain these goals and then set about to realize them. In this study, the investigator will get the consent sign from the participants by explaining the goals that is, to see the effectiveness of structured teaching programme regarding prevention of bronchitis.

Communication: According to Imogene M. King, a person's provide information directly or indirectly to another person. The person receives the information and processes it. In this study, the investigator provides information regarding prevention of bronchitis for pre-schoolers, directly with the help of STP to the receiver that is mothers with pre-schoolers.

Role: According to Imogene M. King, each person occupies in a social system that has specific rules and obligations. In this study, it means investigator occupies educator role and mothers with pre-schoolers occupy learner's role.

Time: According to Imogene M. King, a person experiences a sequence of events that moves toward the future as the individual move forward, change occur. In this study, the mothers with pre-schoolers experience a sequence of events that is pre -test (1st day), structured teaching programme (1st day) and post-test (2nd day) regarding prevention of bronchitis. So, this will improve the knowledge of mothers with pre-schooler regarding prevention of bronchitis.

Space: According to Imogene M. King, each person has a designated physical area or territories that extend from the individual equally in all the directions. In this study, it means the setting where the pre-test, administration of structured teaching programme and post-test conduced i.e., Bagalkot.

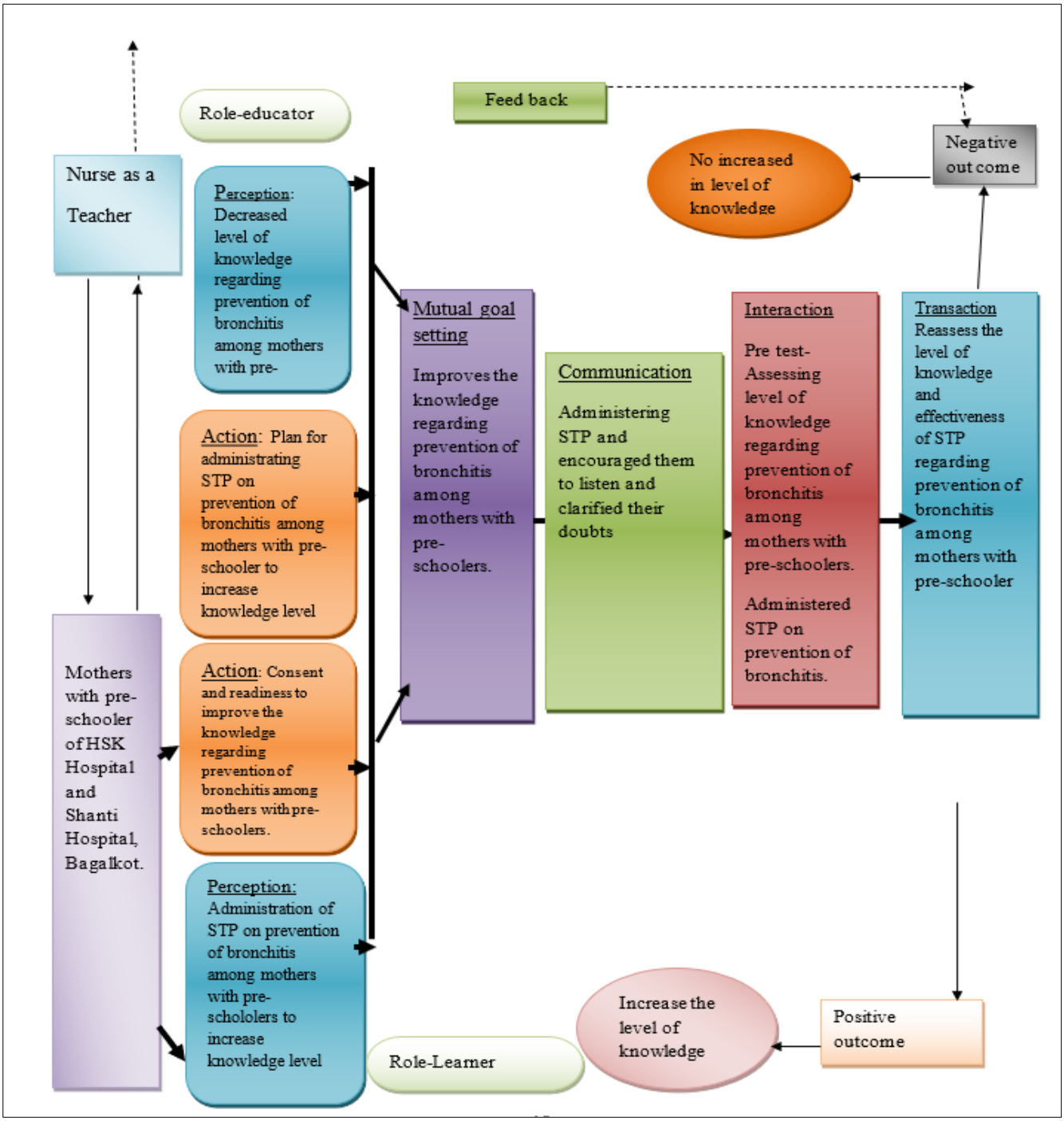

Figure-1

REVIEW OF LITERATURE

A literature review is the effective evaluation of selected documents on a research topic and it provides a

background to the study being proposed. It is also the process of reading, analysing, evaluating and summarizing scholarly materials about a specific topic. It also gives a theoretical base for the research and helps the author to determine the nature of research [22].

A literature review discusses published information in a particular subject area, and sometimes information in a particular subject area with a certain time period. When there is a limited time to conduct research, literature review also provide solid background for a research papers investigation [23].

For the present study the review of literature is organized under the following headings.

1) Review of literature related to incidence and prevalence of bronchitis
2) Review of literature related to etiological factors of bronchitis
3) Review of literature related to knowledge of mothers regarding bronchitis
4) Review of literature related to effectiveness of structured teaching programme

1) Review of literature related to incidence and prevalence of bronchitis

A study was conducted on prevalence of bronchitis. 1984 standardized validated questionnaire was used to assess prevalence of bronchitis among children aged group of 6years and below of different selected districts in India. A total of 96,100 parents from 12 urban and 11 rural sites were interviewed. The study revealed that one or more respiratory symptoms were present in 8.5% of children. The overall prevalence of bronchitis was 5.49%. The study concluded that there is a high prevalence of bronchitis among children. Household environment and tobacco smoke exposure may also increase bronchitis in children.

A study was conducted to determine the variations in the prevalence of bronchitis among young adults across countries 17966 subjects were randomly selected from the general population. The median prevalence of bronchitis was 2.6% with wide variation across countries. Smoking allergens are the major risk factors for chronic bronchitis, especially in males. Only 30% of the geographical variability in prevalence could be explained by differences in smoking habits suggesting that other environmental and genetic factors play an important role [25].

A study was conducted to determine the prevalence and epidemiological aspects of chronic bronchitis in the rural and urban population residing in Shimla hills, and its relationship with various risk factors. The sample included 1330 children (2-12years) from both rural and urban areas of Shimla. The study revealed the overall prevalence of chronic Bronchitis as 9.1%. There was greater in rural areas (13.5%) as compared to urban areas (4.7%). The study concluded that the prevalence of chronic Bronchitis was significantly associated with heating source, area of residence and lower socio-economic status [26].

A study was conducted to assess the prevalence of bronchitis, allergic rhinitis and asthma in childhood. A total of 1047 questionnaires were administered to parents of 3 to 5 years old in a city of Zagreb, Croatia. The study resulted that 40% has high prevalence of bronchitis, 12.13% has high prevalence of allergic rhinitis and 26.02% has asthma. The study concluded that there is a high prevalence of bronchitis among young children and measures are needed to prevent it [27].

A study was conducted to determine the prevalence of bronchitis in Mysore. A total of 900 samples were selected, aged group of 1 to 6 years. Informants were the mothers and they were administered with questionnaire on bronchitis. The study revealed that of the total 900 samples 7.1% were having bronchitis where males had higher prevalence (11.1%) compared to females (4.5%). The study concluded that there is a high prevalence of bronchitis among children [28].

A study was conducted to determine the prevalence of bronchitis in an industrial population in north India. The prevalence was 12.5% in 473 subjects between the age of 17 and 64. There is no age-related rise in frequency of respiratory symptoms. The prevalence of bronchitis in smokers was 5 times the prevalence of non-smokers. This study suggested that allergen is associated with development of bronchitis [29].

2) Review of literature related to etiological factors of bronchitis

A study was conducted to assess the influence of air pollution on the occurrence of severe wheezing bronchitis in children. The study included 197 children aged 4 months to 4 years, who were hospitalized because of breathing difficulties with wheezing, and 350 population controls. Information on potential risk factors for childhood wheezing and a residential history was obtained at home interview with parents. The study reveals that 4.5% among the samples and 1.1% among the control group were having wheezing bronchitis. The results suggested that exposure to air pollution is a risk for the development of wheezing bronchitis in children [30].

A study was conducted to examine associations between children with bronchitis and household characteristics in Alaska Native communities. A home survey method was used in collecting respiratory health data for 561 children aged below 5 years in 328 households. The study reveals that 33.6% were having bronchitis of which 25% of children with bronchitis were living in a wood-heated home with mould. The study concluded that household characteristics (wood smoke

and mould) can lead to bronchitis in children. The result indicated that there may be preventable air pollution exposure (including wood smoke and mould) that leads children to bronchitis in this rural-areas [31].

A study was conducted in to investigate etiologic factors for bronchitis in children up to four years of age. The study included 199 hospitalized children, 351 children from the catchment area of the hospital were used as controls. Information on known and suspected risk factors was obtained through home interviews with a parent. The study reveals that parental smoking was associated with a relative risk of 1.8 (95% confidence interval 1.3 – 2.6) corresponding to a population attributable proportion of 27%. The environmental factors had a stronger influence in the children, and the overall attributable proportion associated with parental smoking, short breast-feeding period and exposure to pets in the household was 43%. The study concluded that environmental factors and parental smoking are a risk for children below 4years of age to suffer from bronchitis [32].

A study was conducted to assess the mothers on causes of bronchitis in under 5 children. For this 501mothers were selected randomly from low-income communities and were interviewed. The result showed that 64.1% indicated that bronchitis is caused by lack of parental care, 35.9% believed that virus causes the disease, 48% picked sore throat and productive cough as possible sign and 62% picked vomiting and difficulty in breathing as sign of bronchitis in children. The study shows that Peruvian mothers have inadequate knowledge about causes and recognizing bronchitis in children. It concluded that efforts are needed to educate Peruvian mothers about the causes and recognition of bronchitis in children [33].

A study was conducted on "contribution of smoking and air pollution exposures in urban areas to respiratory health". Data was collected from 250 Childrens with the help of spirometer and physical examination about respiratory diseases. The study revealed that exposed to smoked more often sand lived more often close to major roads contributes about 56.19% to respiratory diseases. The study concluded that smoking, and exposure to increased level of environmental air pollution associates with adverse effects on respiratory health [34].

A study was conducted on air pollution linked to bronchitis in infant and early childhood in two districts at Czech Republic, sample size of 1,133 children from birth to 4.5 years of which one of those districts Teplice is known for its high level of air pollution and the other Prachatice has much lower levels of air pollution. Hertz-Picciotto and colleagues compared information with detailed data on air quality. The findings revealed a significant increase in bronchitis from exposed to medium-to-high level of air pollution. The overall was estimated to be 11.5%, Teplice – 2.5% and Prachatice – 8.5% [35].

A study was conducted to assess the burden of bronchitis among rural Indian children by using survey method. Samples of 73,605 children's of under five were selected from different four major centers in India for the study. The study revealed that 4.4 % female and 7.3% males of the total population were having bronchitis. The study suggested that poverty and unhealthy environment are strongly related to bronchitis. Though national wide health plans have succeeded in reducing fatality of respiratory diseases to a certain extent, there is however a great need to improve effective area specific health programs and social and economic development are mandatory in rural areas to achieve the desired health goals [36].

A study was conducted to assess the prevention of bronchitis among children from secondhand smoking, pollutants and allergens. A randomize control of 200 children between 2 to 3 years of age with the risk of bronchitis are been selected. Lung function was measured by spirometry and oscillometry technique at four month intervals throughout the study. The study resulted that 57% are been prevented from developing bronchitis. The study concluded that bronchitis in children can be prevented by taking proper measures like avoiding smoke pollutants and allergens [37].

3) Review of literature related to knowledge of mothers regarding bronchitis

A study was conducted to assess the knowledge of mothers regarding bronchitis and whether there is any correlation between their level of knowledge and the number of years of formal education they have had. A structured interview of 373 mothers, who attended with their children at the pediatric outpatient clinic of King Khalid University Hospital in Riyadh, was conducted by a trained non-medical research assistant using the items and statements of the questionnaire as a base. A knowledge score was calculated from the number of correct answers. The maximum score was 40. An arbitrary cut-off score of 25 was considered satisfactory. The mean score of the total sample was 25 (out of 40) and the minimum score obtained was 14, and the maximum 36. 58% scored 25 or more and 42% scored less than 14. The study revealed significant gaps in mothers' knowledge of bronchitis. The study concluded that there is a need for health education programs that target university students, mothers and other caregivers. These should be delivered by trained personnel in classes, courses, and special sessions. In addition, health care facilities should be reformed to make health education an essential and compulsory part of health care delivery [38].

4) Review of literature related to effectiveness of structured teaching programme

A cross-sectional study was conducted worldwide in knowledge attitude and practices of childhood injuries and their prevention among primary school teachers in Singapore. The samples are collected with a two-stage stratified random sampling This study revealed that teachers are having adequate knowledge in road safety but poor knowledge in sting bite and first aid practices. He concluded the study with needed frequent educational programme [39].

A study was conducted in Bangalore to assess the knowledge and practice of mothers of under five children regarding bronchitis. Sample consisted of 60 mothers and questionnaires were given regarding knowledge and practice of bronchitis. The study found that about 48.3% of mothers had inadequate knowledge about bronchitis and majority (70%) of mother's practice levels of bronchitis was unsatisfactory. There is a significant association between knowledge and practice with selected demographic variables and high positive correlation between knowledge and practice. The study concluded that there is a need for educational programme to improve the knowledge and practice of mothers regarding bronchitis in under five children [40].

A study was conducted to assess the 'mother's knowledge, attitudes and practices regarding bronchitis to control bronchitis in developing countries. A total of 309 mothers were interviewed. The study revealed that only 18% of mothers described bronchitis satisfactorily, 87.1% of the mothers said they would seek health centre services for chronic bronchitis and 34% of mothers feel normal for a child to have cold and flu. The study concluded that Health education programmes can be an effective designed to take into account with the prevailing KAP of the community towards bronchitis in children [41].

A study was conducted to assess mother's early identification of bronchitis in Munirka, New Delhi. A sample of 106 mothers in rural area was interviewed to determine how they would recognize bronchitis in children and what therapies they would practice with bronchitis. 40 mothers recognized bronchitis by observing productive cough and shortness of breath while 66 mothers refer it as seasonal illness and with regard to management of bronchitis 60% of the mothers preferred not to give treatment or to use only home remedies. The study concluded that there is inadequate knowledge among mothers regarding identification of bronchitis in children [42].

A study was conducted on 'awareness of urban slum mothers regarding home management of symptoms of bronchitis in children'. A total of 635 mothers of under five children from urban slum area of Nanded city were assessed to determined their awareness about home management on symptoms of bronchitis. The study resulted that 57.4% of the mothers are not aware about the management of symptom of bronchitis. The study concluded that mothers being the primary care giver of children needs to be aware of the management on symptoms of bronchitis [43].

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 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 exposure to smoke 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%; productive 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 RTI targeting mother of children aged less than five years [44].

1. Review of literature related to effectiveness of structured teaching programme on prevention of bronchitis

A study was conducted to evaluate the impact of structured teaching programme on the level of knowledge of bronchitis among mothers in France. A total of 860 samples were selected by using a phone questionnaire. Their knowledge on bronchitis was assessed during a telephone interview. They were randomized into 2 groups, with one group receiving the structured teaching programme, and were then contacted 3 months later for a second interview. The changes in the knowledge of bronchitis from baseline were compared between subjects who reported receiving teaching programme and the control group. The result revealed that at the follow up interview, the proportion of the mothers who spontaneously mentioned respiratory difficulties in children when asked about the meaning of bronchitis significantly increased in case group (+11.9%) compare with the control group (+2.6%, $p<0.05$). This study shows that structured teaching programme can significantly improve the knowledge of bronchitis among mothers [45].

A study to assess the effectiveness of booklet among mothers of under five children on prevention and management of injuries in selected areas of Udupi, Karnataka. The study findings reveal that mother have poor knowledge in pretest and gained adequate knowledge in posttest. She concluded that the health professional and researchers need to impart the knowledge through various educational programme [46].

A study was conducted to determine the effect of the health education program in mothers' knowledge regarding prevention of bronchitis by using Health Belief Model. The sample size was 200 children aged 1-6 years 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 (56%), while almost there was no change of the knowledge's level among group II (20%). There was a high significant increase in the level of knowledge of mothers in group I after the program, while the increases were not significant in-group II. The study conclude that there is effectiveness of health education programme on mothers knowledge regarding prevention of bronchitis in children [47].

A study was conducted to evaluate the impact of teaching programme on the level of knowledge of bronchitis in subjects with or without bronchitis in France A total of 860 samples with or at the risk of bronchitis were selected by using a phone questionnaire. Their knowledge on bronchitis was assessed during a telephone interview. They were randomized into 2 groups, with one group receiving the teaching programme, and were then contacted 3 months later for a second interview. The changes in the knowledge of bronchitis from baseline were compared between subjects who reported receiving teaching programme (true sensitized group) and the control group. The result revealed that at the follow up interview, the proportion of the patients who spontaneously mentioned respiratory difficulties when asked about the meaning of bronchitis significantly increased in the true sensitized group(+11.9%) compare with the control group (+2.6%, $p<0.05$). This study shows that teaching programme given to the subjects with or at risk of bronchitis can significantly improve their knowledge of bronchitis [48].

A study was conducted to determine the Knowledge of mothers regarding bronchitis in their children aged less than five years in Baringo District, Kenya. Mothers with children aged 3-5 years were recruited following stratified random sampling in three areas of Baringo District to represent low, medium and high potential areas based on agricultural productivity. A mixed structured and unstructured questionnaire was administered to each of the respondent mothers by the investigator; with the help of an interpreter where necessary. A total of 309 mothers (28-45 years) were interviewed. Only 28% of mothers described bronchitis satisfactorily and rest 72% of the mother's answered was unsatisfactory. The study reveals that the mothers had inadequate knowledge about bronchitis [49].

A study was conducted to assess the parents on causes and antibiotic use for treating bronchitis in children, Malaysia. They involved 421 parents who were surveyed by using an interviewer administered questionnaire. Approximately 49% of parents from this study believed that weather was the main cause of bronchitis, 23% thought it was due to food, and only 28% said it was caused by virus. 48% of them believed that antibiotics were helpful in treating the bronchitis, 26% of parents thought that antibiotics was not needed, 26% believe home remedy was enough. The study shows that parents have inadequate knowledge about causes of bronchitis and misconception on antibiotic use for treating bronchitis in children. The study suggested that improved parental education may reduce faulty believes and perception about bronchitis [50].

A quasi- experimental study was carried out in Tamilnadu to evaluate the effectiveness of structured teaching programme (STP) on bronchitis among mothers of hospitalized children. A sample of fifty mothers of under five children with bronchitis were chosen. Structured questionnaire were used to assess the knowledge, attitude and practice of mothers on bronchitis. After pre-test structured teaching programme (STP) on bronchitis was given with appropriate audio visual aids. The post test was conducted three days after STP. The study findings revealed that after STP there was a significant improvement in the mother's knowledge about (96%), attitude about (80%) and practice about (80%) regarding bronchitis. The study concluded that STP can improve the knowledge of the mother's effectively [51].

RESEARCH METHODOLOGY

Methodology of research organizes all the component of the study is a way that is most likely to lead to valid answer to the sub-problems that have been posed.

This chapter deals with the methodology adopted for this study. It includes research design, research approach, study setting and sampling technique, sampling criteria, content validity, and development of tool, pilot stud, reliability, data collection procedure and plan for data analysis.

RESEARCH APPROACH

Research approach is the basic procedure for the research of enquiry. The research approach helps the researcher to determine what data to collect and how to

analyze it. It also suggests possible conclusions to be drawn from the data. In view of the nature of problem selected for the present study to assess the difference in knowledge regarding prevention of bronchitis among mothers with pre schoolers. In this study research approach was one group pretest and post test approach.

RSEARCH DESIGN

Research design is an investigator's overall plan for obtaining answers to the research question or for testing hypothesis. Research design helps the researcher in selection of subjects, identification of variables, their manipulation and control.

The selection of design depends upon the purpose of the study, the research approach and variables to be studied. Pre-experimental research design was chosen for the study.

GROUP	PRE-TEST	INTERVENTION	POST-TEST
Mothers with pre schoolers children(50)	01	X	02

Key:

01 = assessing the existing level of knowledge on prevention of bronchitis through structured questionnaire.

X = intervention (structured teaching programmed) on prevention of bronchitis will be given to the mothers with pre-schoolers.

02 = assessing the post test level of knowledge regarding prevention of bronchitis among mothers with pre-schoolers. To the same subject with the help of same questionnaire.

VARIABLES

Variables are qualities, properties or characteristics of the person, things or situation that change or vary. The variables mainly included in this study are socio demographic variable and dependent variable.

a. DEMOGRAPHIC *VARIABLE*

In this study the demographic variable includes the characteristic of mothers such as Age, religion, Educational status, Socio economic status, Occupational status, Type of family, Number of children, and source of information regarding prevention of bronchitis.

b. ssDEPENDENT *VARIABLE*

The dependent variable is the variable, the researcher is interested in understanding, explaining or predicting. This study the dependent variable is knowledge of mothers with pre-schoolers regarding prevention of bronchitis.

c. INDEPENDENT VARIABLES

An independent variable is the variable that stands alive and it does not depend on any other. In this study the independent variable was structured teaching programme on knowledge regarding prevention of bronchitis.

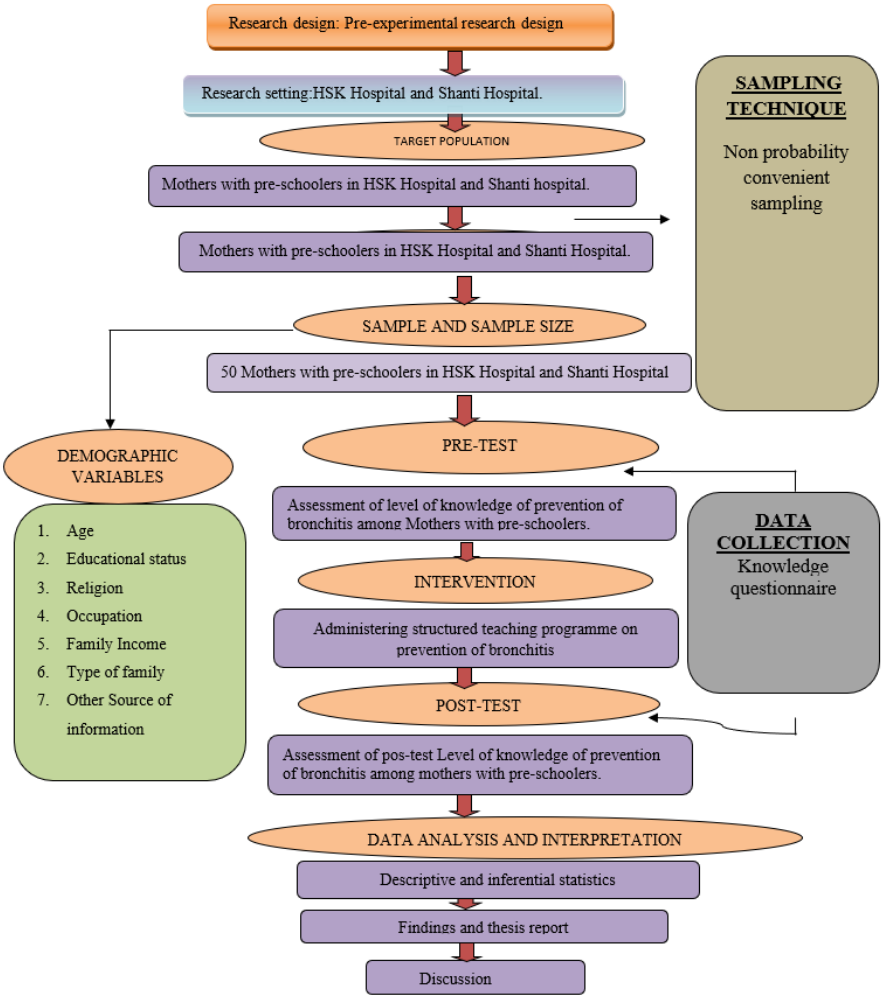

Figure-2: Schematic presentation of research design

SETTING OF THE STUDY

The setting is the physical location where a study is conducted. The present study was conducted in HSK hospital and Shanti Hospital in Bagalkot. These settings were selected because of the geographical proximity, availability of the samples and permission to conduct the study.

TARGET POPULATION

The target population, which represents the entire group or all the elements like individuals or objects that meet certain criteria for inclusion in the study. The target populations in the study were mothers with preschoolers.

SAMPLE

Sample refers to subset of the population that is selected to participate in a particular study. In this study, the sample consists of 50 mothers with pre schoolers children in HSK Hospital and Shanti Hospital in Bagalkot. For pilot study sample size were 5. For main study the sample size were 50.

SAMPLING TECHNIQUE

Non–probability samples were selected based on the judgment of the researcher to achieve particular objectives of the research at hand.

Non-probability convenient sampling technique was used. Convenience sampling technique was a strategy in which the researcher's knowledge of the population and its elements were used to select sample, which are typical to the population. A total of 50 mothers with preschoolers in selected Hospitals were selected.

SAMPLING CRITERIA

a) Inclusion criteria

Inclusion criteria includes mothers those who are:

- With preschooler children admitted in selected hospitals, Bagalkot.
- Able to communicate freely in English or Kannada
- Willing to participate in the study

b) Exclusion criteria

Exclusion criteria includes mothers those who are:

1. Participating in pilot study
2. Not willing to participate
3. Not available during data collection

4. Not able to communicate freely in English or Kannada.

SELECTION AND DEVELOPMENT OF TOOL

Tools were prepared on the basis of objectives of the study.

A structured questionnaire was developed on the basis of the objectives of the study, as it was considered to be the most appropriate instrument to elicit responses from mothers with preschooler. Since the objectives of the study was to assess the knowledge of mothers with preschooler. It was decided that the questionnaire would have three sections of the following aspects;

SECTION A: SOCIO –DEMOGRAPHIC DATA

It consist of characteristics of mothers with preschooler. such as Age, religion, educational status, socioeconomic status, occupational status, type of family, number of children and previous source of information on bronchitis.

SECTION B: STRUCTURED KNOWLEDGE QUESTIONNAIRE

The Knowledge questionnaire was prepared after going through an intensive review of literature including research articles and personal discussions with the experts.

It included 30 questions related to prevention of bronchitis; the items were multiple choice questions in nature. The mothers with preschooler were expected to choose the correct responses. All the questions had only one correct answer. The tool was in English and Kannada.

A blue print was made to prepare the test items of the tool. Items related to cognitive domain only were selected. Content area was classified under different aspects such as Knowledge on General aspects of bronchitis and Knowledge on prevention of bronchitis.

Table 1: Blue print of structured knowledge questionnaire

Sl. No	Assessment Variables	No. of questions	Minimum Score	Maximum Score
1.	Knowledge on general aspects of bronchitis	15	0	15
2.	**1.1.1.1.**Knowledge on prevention of bronchitis	15	0	15
3.	**1.1.1.2.**Overall	30	0	30

Scoring of knowledge questionnaire

The knowledge regarding prevention of bronchitis were assessed in terms of knowledge scores, each correct answer was given a score of 1 and score of 0 for wrong answers. The maximum score was 30. For the purpose of the study the knowledge scores were categorized as follows;

Table-2: Classification of the level of knowledge of mothers with preschooler children regarding prevention of bronchitis

Score	Level of Knowledge
Below 50%	Inadequate
50-75%	Moderate
Above 75%	Adequate

Development of STP

The STP on prevention of bronchitis was based on the literature review and suggestions from the experts, the STP consist of the following subtopics

- General information regarding bronchitis
- Prevention of bronchitis.

Validity of the tool

Content validity refers to the degree to which an instrument measures what it is supposed to measure.

Content validity of the knowledge questionnaire was established by giving it to experts along with statement of the problem, objectives, blue print and criteria for evaluation. The experts were selected from department of Pediatrics and in the nursing field. The valuators were requested to give their opinion as not relevant, relevant to some extent and relevant of the items in the tool. The tool consisted of 30 items in knowledge questionnaire. Modifications were made in terms of language and grammar according to experts' suggestions.

Reliability of the tool

Reliability is the degree of consistency or accuracy with which an instrument measures the attribute it is designed to measure.

Reliability of the tool was established from data of 5 samples by split half method, which measures the co-efficient of internal consistency. The reliability value of the tool for knowledge questionnaire was r=0.88 which indicates high degree of reliability. Hence the tool was highly reliable; no modifications of the tool were made.

Ethical Considerations

- The study was accepted by the research committee of sajjalashree College of Nursing
- Formal permission was obtained from the concerned authority to HSK Hospital and Shanti Hospital, Navanagar Bagalkot.
- Written informed consent was obtained from the study samples. There was no ethical issue aroused during the study period.

- The subjects were informed that their participation was purely on voluntary basis. They had the freedom to withdraw from the study if needed at any time and the confidentiality of the data will be maintained.

Pilot Study

Pilot (1999) states "Pilot study is a small scale version or trail in preparation for a major study" [51].

For the Pilot study the investigator has selected HSK Hospital, Bagalkot. Formal permission was obtained from the concerned authority to conduct the pilot study from 10/07/2024 to 25/07/2024 and 5 mothers with preschooler were selected by non probability convenient sampling technique for the same purpose. On the first day the investigator approached the mothers and given brief self introduction, then followed by the researcher obtained the written consent from the samples for the willingness to participate in the study and good rapport was established. The researcher has done the data collection with structured knowledge questionnaire, after pre test the investigator administered structured teaching programme on prevention of bronchitis. The next day post test was conducted by administering the same questionnaire to the same subjects.

Method of data collection

Phase-I

The data collection was scheduled from July 2nd to 20th 2024. Prior permission was obtained from concerned authority of HSK Hospital, Navanagar Bagalkot.

Phase-II

During the data collection schedule, the mothers with preschooler who met the inclusion criteria were selected by using non probability convenient sampling technique.

Phase-III

- Before administering the questionnaire the purpose of the study was explained to the entire mothers with pre-schoolers children with self- introduction and a written consent was obtained from them.
- A separate place was selected for the data collection and privacy was maintained and the subjects were made comfortable.
- The investigator took an average time of 20-30 minutes for each session. The investigator got co-operation from the mothers with preschooler.

Phase-IV

At the end of the pre test session, the investigator administered structured teaching programme on prevention of bronchitis and the mothers with pre schoolers children were encouraged to ask their doubts and get it clarified.

Phase-V

After administering STP, post test was done by using the same structured questionnaire on the same subjects.

Plan for data Analysis

Analysis is the systematic organization and synthesis of research data and the testing of research hypothesis by using this data's.

The data obtained was planned to be analysed based on the objectives and hypothesis of the study using descriptive and inferential statistics. To compute the data a master data sheet was prepared by the investigator.

The plans of data analysis were as follows:

1. The frequencies and percentages for the analysis of demographic variables.
2. Mean, mean percentage and standard deviation to assess the pre test and post test knowledge regarding prevention of bronchitis among mothers with preschooler.
3. Paired't' test is used to assess the effectiveness of STP regarding prevention of bronchitis among mothers with preschooler.
4. Chi-square test is used to associate the pre test level of knowledge regarding prevention of bronchitis among mothers with preschooler with their selected demographic variables.

Data analysis and statistical methods used:

Table-3: Data analysis and methods used for the study

No;	Data analysis	Statistical methods	Remarks
1.	Descriptive Analysis	1. Frequency & Percentage 2. Mean score and standard deviation	1. To analyse the demographic variables 2. To assess the pre test and post test knowledge regarding prevention of bronchitis among mothers with preschooler.
2.	Inferential Analysis	1. Paired 't' test 3. Chi-square test	1. To assess the effectiveness of STP regarding prevention of bronchitis among mothers with preschooler. 3. To associate the post test level of knowledge of mothers with preschooler with their selected demographic variables

RESULTS

This chapter deals with the results of data collected from a sample of 60 mothers with preschooler regarding prevention of bronchitis, using a structured knowledge questionnaire. Analysis is categorizing, ordering, manipulating and summarizing of data to obtain answers to research hypothesis and questions. The data, which are necessary for the study, were collected through structured knowledge questionnaire and are analysed by using relevant descriptive and inferential statistics.

The data were analyses on the basis of objectives of the study

- To assess the pre-test level of knowledge regarding prevention of bronchitis among mothers with preschooler at selected hospitals in Bagalkot.
- To evaluate the effectiveness of structured teaching programme regarding prevention of bronchitis among mothers with preschooler at selected hospitals in Bagalkot.
- To find out the association between level of knowledge of mothers with pre schoolers children regarding prevention of bronchitis with their selected demographic variables.

The data is organized and presented in five sections

Section-1: Frequency and percentage distribution of selected demographic variables of mothers with preschooler.

Section-2: Assessment of pre-test knowledge score of mothers with preschooler regarding prevention of bronchitis.

Section-3: Effectiveness of STP on prevention of bronchitis.

Section-4: Comparison between pre-test and post-test level of knowledge of mothers with preschooler regarding prevention of bronchitis.

Section-5: Association between level of knowledge of mothers with pre schoolers children with their selected demographic variables.

SECTION-I
FREQUENCY AND PERCENTAGE DISTRIBUTION OF SELECTED SOCIO DEMOGRAPHIC VARIABLES OF MOTHERSWITH PRESCHOOLER.

Table-4: Frequency and percentage distribution of selected socio demographic variables of mothers with pre-schooler; n=50

Characteristics	Category	Respondents	
		N	%
Age in Year	a) 18-23years	8	16
	b) 24-29 years	21	42
	c) 30-34 years	16	32
	d) Above 35 years	5	10
Religion	a) Hindu	34	68
	b) Muslim	4	8
	c) Christian	12	24
	d) Others	0	0
Educational status	a) Primary education	9	18
	b) Secondary education	19	38
	c) Under graduate	15	30
	d) Post graduate or above	7	14
Occupational status	a) Business	14	28
	b) Private employee	12	24
	c) Government employee	6	12
	d) House wife	18	36
Monthly Family income	a) Rs 5000-10000/-	16	32
	b) 10001-15000	21	42
	c) 15001-20000	8	16
	d) Above 20001	5	10
Type of family	a) Nuclear	16	32
	b) Joint	22	44
	c) Other	12	24
Number of children	a) 1	15	30
	b) 2	22	44
	c) 3 or above	13	26
Previous knowledge about bronchitis	a) Yes	38	76
	b) No	12	24
Source of information	a) Mass media	8	16

	b) Health personnel	12	24
	c) Family and friends	5	10
	d) Nil	25	50

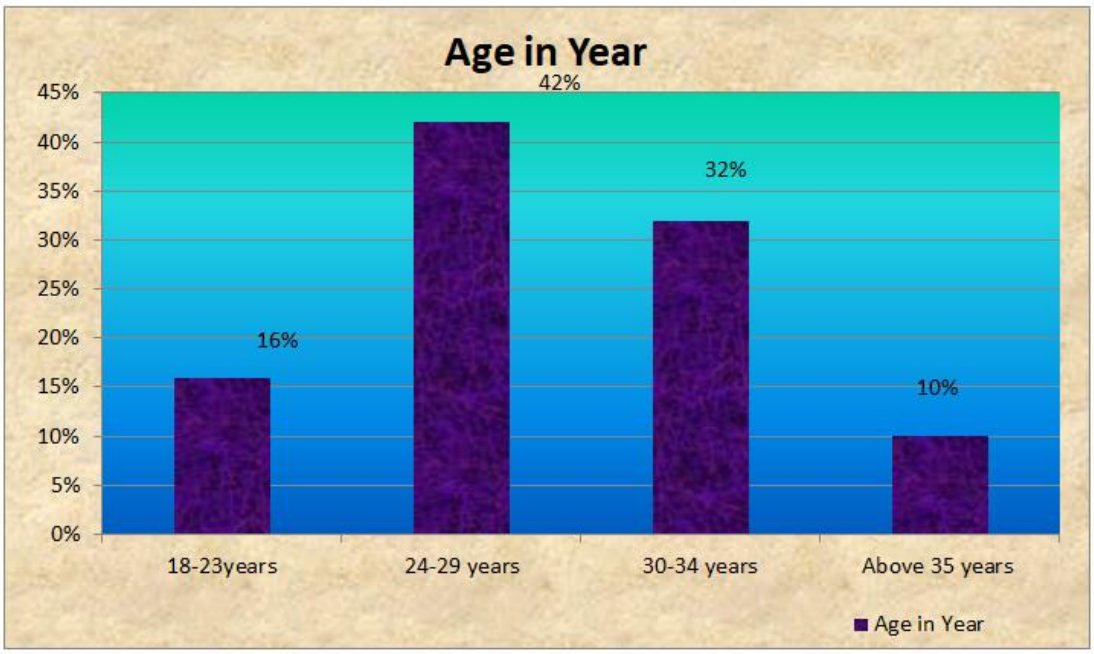

Figure-3: Distribution of mothers with preschooler on the basis of age

Table-4, Figure- 3 shows the distribution of mothers with preschooler on the basis of age. Out of 50 mothers 16.0% (8) of mothers belongs to the age group of 18 23years, 42.0% (21), 32.0% (16), and 10.0% (5) of them were belonging to age group between 24-29years, 30-34 years and above 35 years respectively.

Hence it can be interpreted that majority of the mothers were in the age group of 24-29 years.

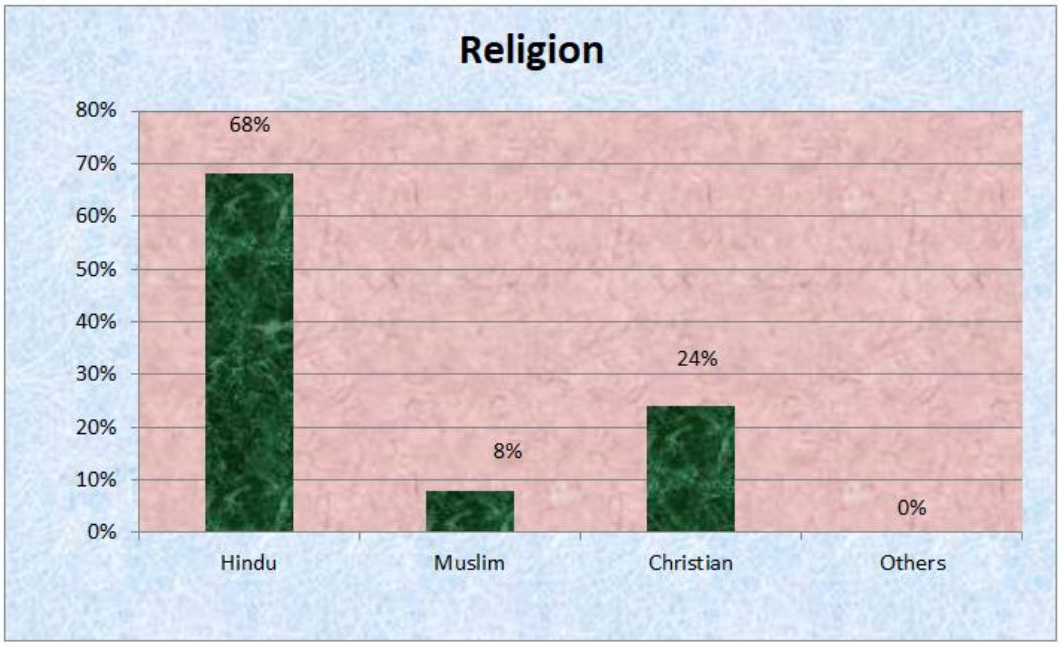

Figure-4: Distribution of mothers with preschooler on the basis of religion

Table-4, Figure-4 describes the distribution of mothers with preschooler on the basis of religion. With

regard to the religion majority 68% (34) of mothers were Hindu, 24% (12) and 8% (4) Christian and Muslim respectively.

Hence it can be interpreted that majority of the staff nurses were.

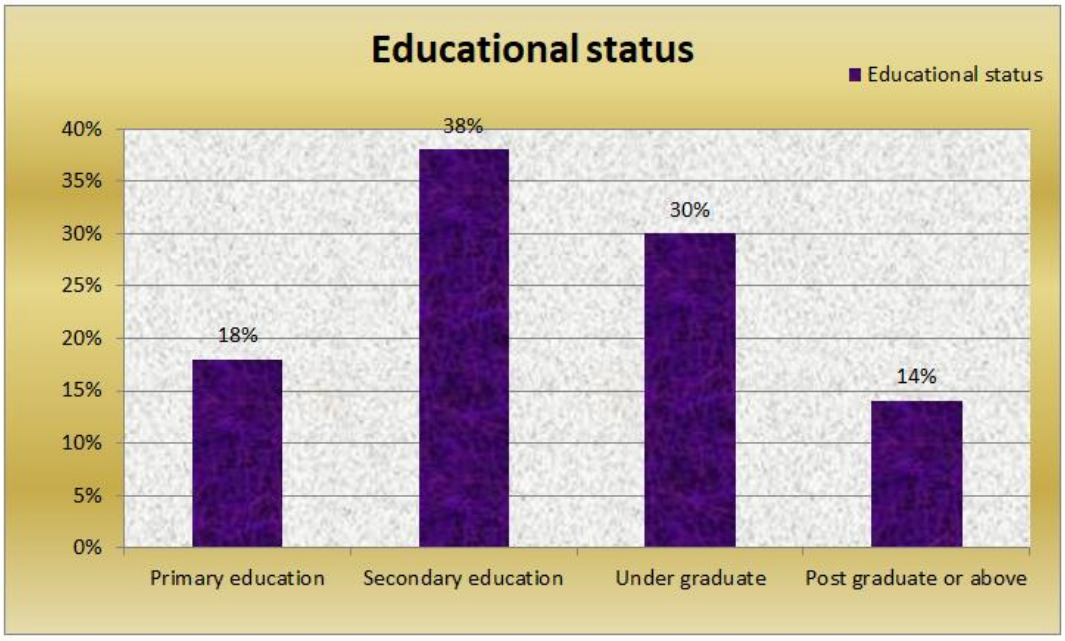

Figure-5: Distribution of mothers with preschooler on the basis of education

Table-4, Figure-5 illustrates the distribution of mothers on the basis of educational status. Out of 50 mothers 18% (9) of them were primary education, 38% (19) of mothers were PUC, 30% (15) of mothers were under graduate and 14% (7) were post graduate or above.

Hence it can be interpreted that majority of the mothers completed secondary education.

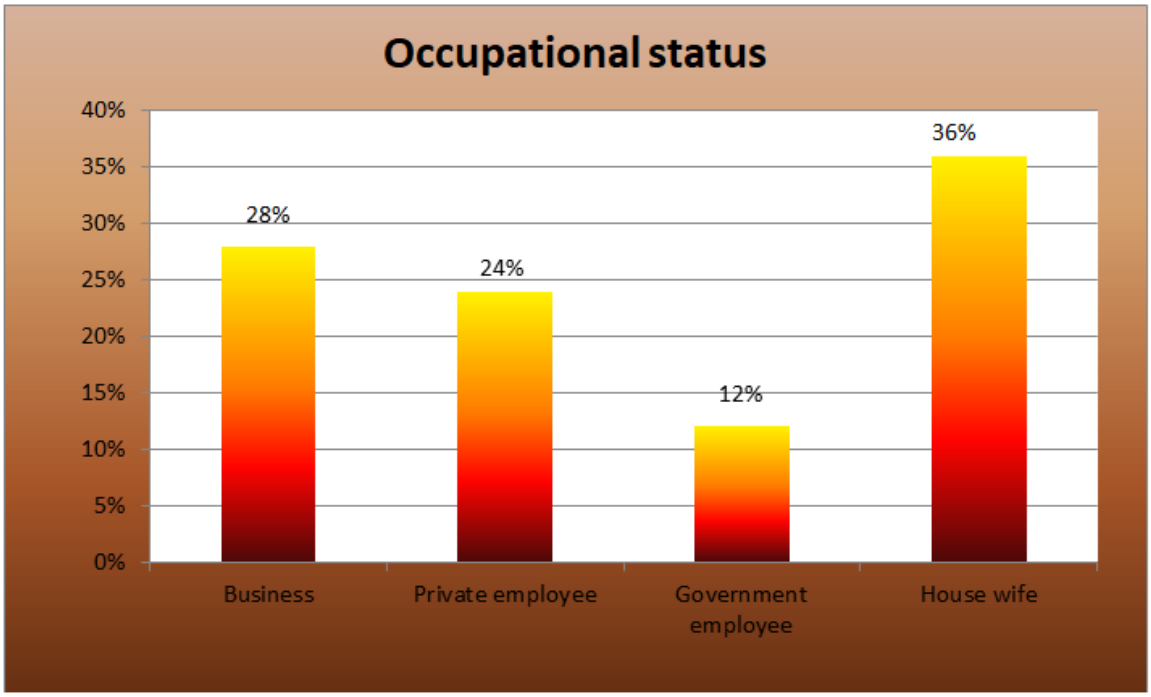

Figure-6: Distribution of mothers with preschooler on the basis of occupation

Table-4, Figure- 6 explains the distribution of mothers on the basis of occupation. Among 50 mothers majority 36% (18) of mothers were House wife, 28% (14) of mothers were doing business, 24% (12) of them

were private employee and 12% (6) of them were doing government employee.

Hence it can be interpreted that majority of the mothers were doing house wife.

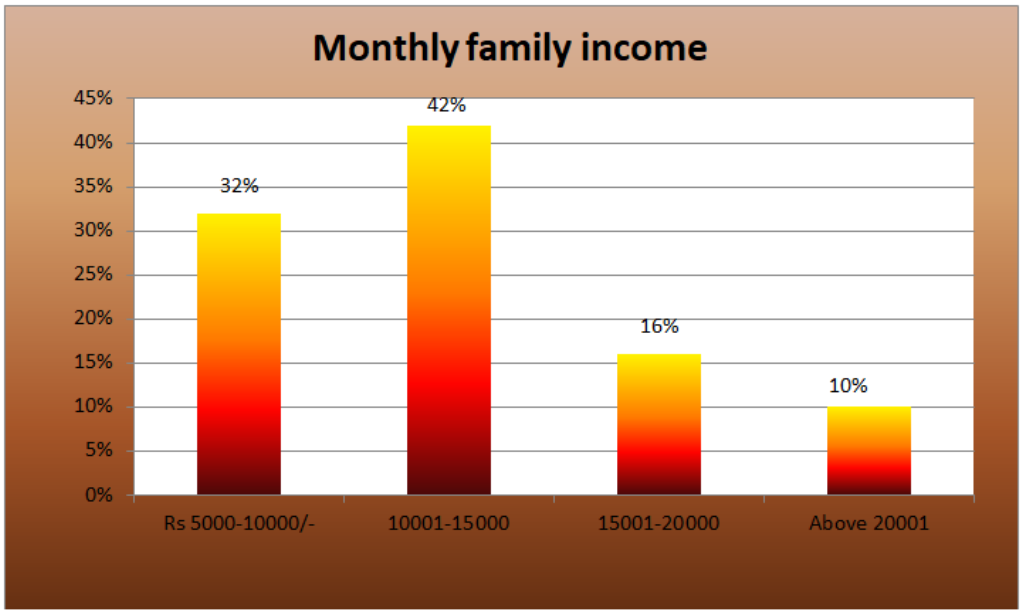

Figure-7: Distribution of mothers with preschooler on the basis of monthly income

Table-4, Figure-7 shows the distribution of mothers with preschooler on the basis of monthly income. Out of 50 mothers majority 42% (21) of them had Rs.10001-15000, 32% (16), 16% (8) and 10% (5) of them had monthly income of Rs.5000-10000, Rs.15001-20000 and above 20001 respectively.

Hence it can be interpreted that majority of the mothers had monthly income of Rs. 10001-15000.

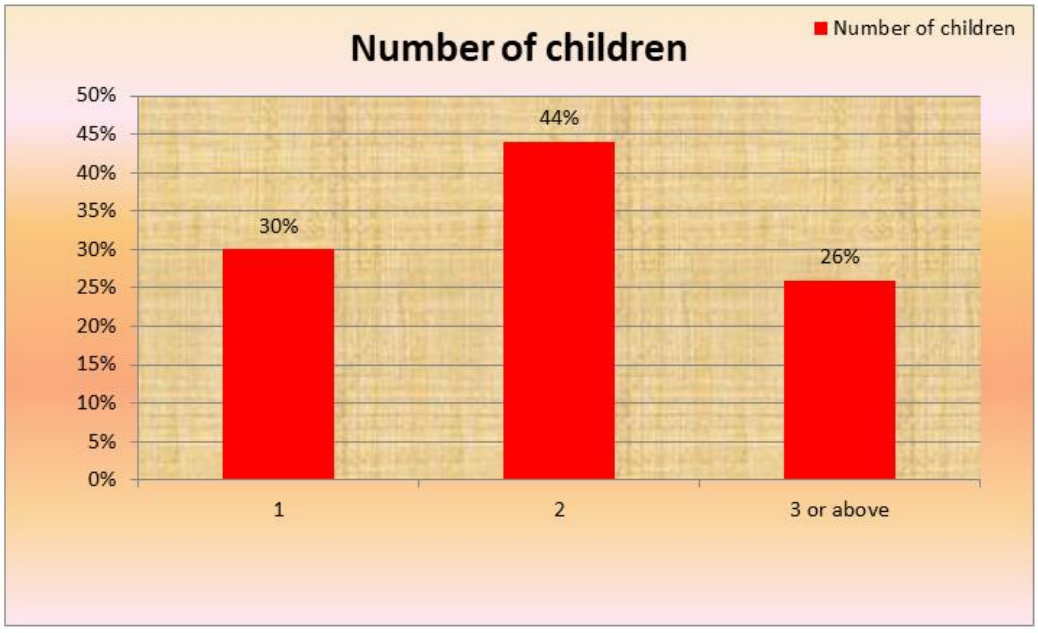

Figure-8: Distribution of mothers with preschooler on the basis of number of children

Table-4, Figure-8 explains the distribution of mothers on the basis of number of children. Among 50 mothers majority 44% (22) of mothers have 2 children, 30% (15) of mothers have 1 children, and 26% (13) of them were have more than 3 children.

Hence it can be interpreted that majority of the mothers have 2 children.

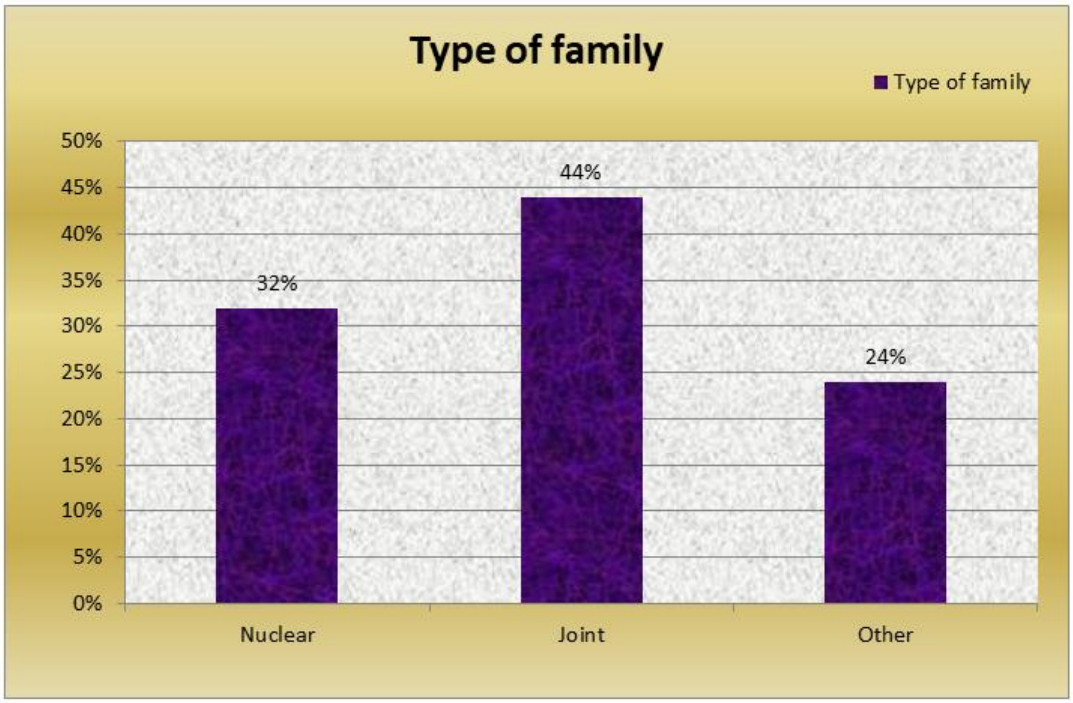

Figure-9: Distribution of antenatal women on the basis of type of family

Table-4, Figure-9 shows the distribution of mothers on the basis of type of family. Among 50 mothers 44% (22) belongs to joint family, 32% (16) and 24% (12) belongs to nuclear family and others respectively.

Hence it can be conclude that majority of mothers belongs to joint family.

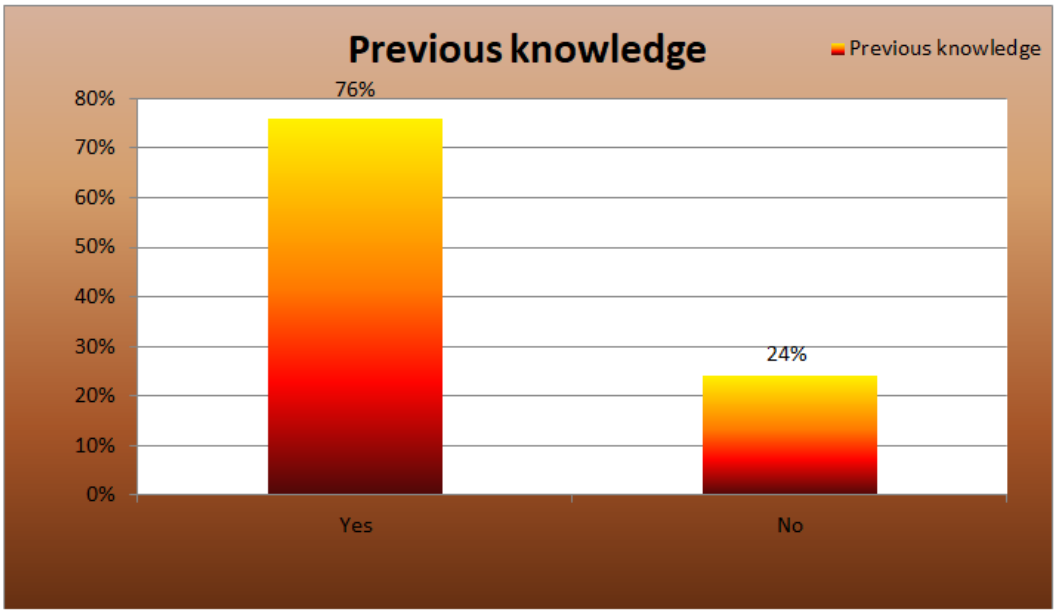

Figure-10: Distribution of mothers with preschooler on the basis of previous knowledge about bronchitis

Table-4, Figure-10 explains the distribution of mothers on the basis of previous knowledge about bronchitis. Among 50 mothers majority 76 % (38) of mothers does not have previous knowledge, 24 % (12) of mothers have previous knowledge.

Hence it can be interpreted that majority of the mothers does not have previous knowledge about bronchitis.

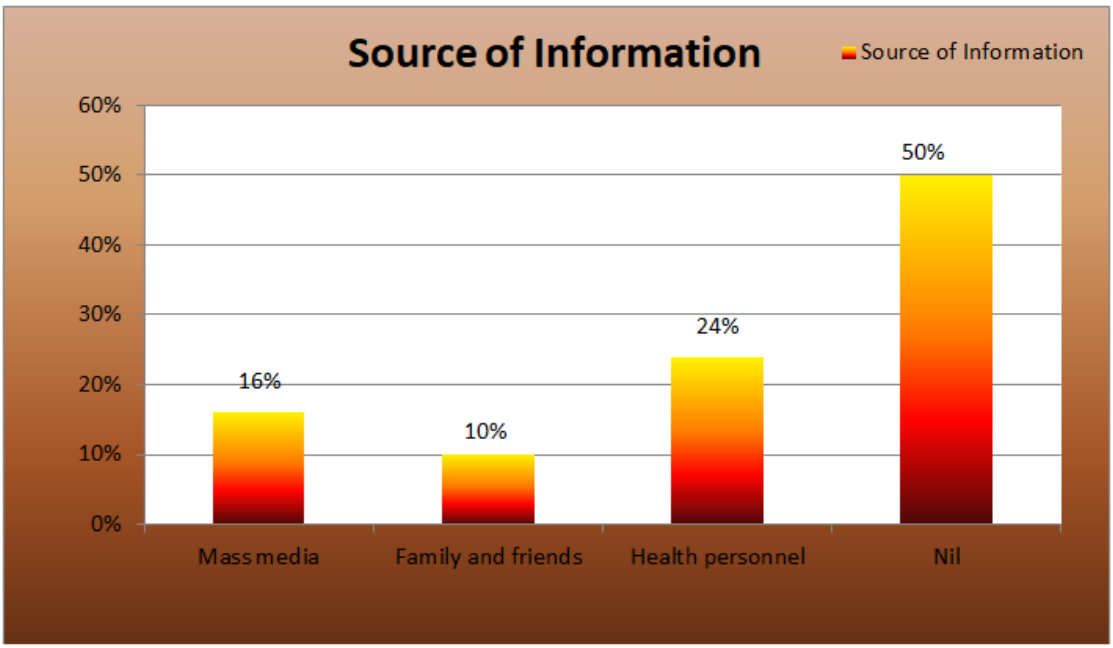

Figure-11: Distribution of mothers with preschooler on the basis of source of information

Table-4, Figure-11 shows the distribution of mothers with preschooler on the basis of sources of information. Out of 50 mothers majority 50% (25) of them were not aware about the prevention of bronchitis, 24% (12) of them were accessed through health personnel, 10% (5) were getting information from friends and family members and remaining 16% (8) got information from mass media.

Hence it can be interpreted that majority of the mothers are not aware about the prevention of bronchitis.

SECTION-1I (A)
PRE-TEST KNOWLEDGE SCORE OF MOTHERS WITH PRESCHOOLER REGARDING PREVENTION OF BRONCHITIS

Table-5: Pre-test score knowledge of mothers with preschooler regarding prevention of bronchitis; N=50

Level of Knowledge	Score	No of Respondents (%)	
		No	%
Inadequate	< 50%	34	68
Moderate	51--75%	16	32
Adequate	>76%	0	0
Total		50	100

Table-5 Figure-12 depicts that pre test knowledge score of mothers with preschooler regarding prevention of bronchitis. In this study the majority of mothers 68 % were having inadequate level of knowledge regarding prevention of bronchitis, whereas 32 % of them were having moderate level of knowledge and no one has adequate level of knowledge regarding prevention of bronchitis.

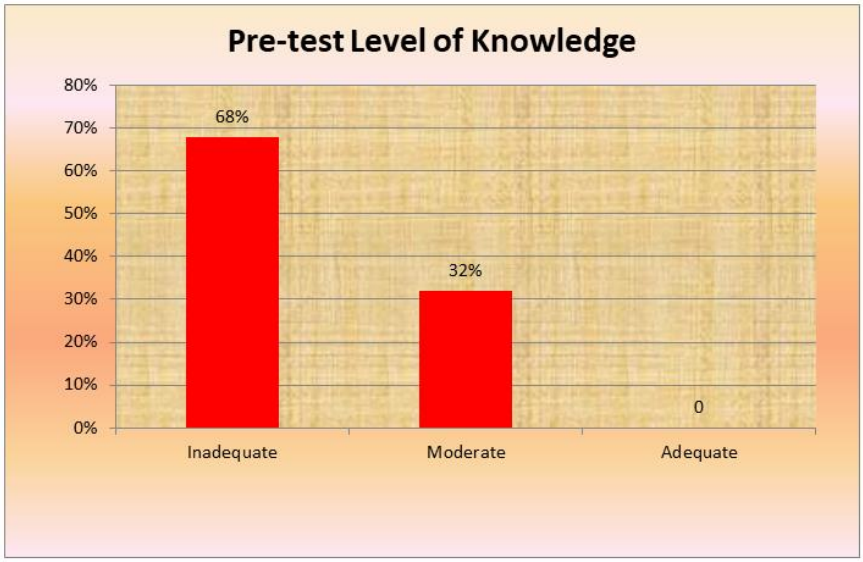

Figure-12: Pre test knowledge of mothers with preschooler regarding prevention of bronchitis

ASPECT WISE MEAN PRE-TEST KNOWLEDGE SCORES OF MOTHERS WITH PRESCHOOLER REGARDING PREVENTION OF BRONCHITIS

Table-6: Aspect wise mean and SD of the pre-test knowledge scores of mothers with preschooler regarding prevention of bronchitis; N=50

Aspects wise knowledge	Max Statement	Max Score	Range	Mean	SD
General information of bronchitis	14	14	3-10	6.28	3.72
Prevention of bronchitis	16	16	1-11	8.61	2.39
Overall	30	30	4-21	14.89	6.11

Table-6 describes aspect wise mean and SD pre test knowledge score of the mothers regarding prevention of bronchitis. In the aspects of knowledge on general aspects of bronchitis the mothers had mean score of 6.28 with SD 3.72. Mothers had mean score of 8.61with SD 2.39 in the aspect of prevention of bronchitis.

The overall mean and SD were 14.89 and 6.11 respectively.

SECTION-II (B)
POST-TEST KNOWLEDGE SCORES OF MOTHERS WITH PRESCHOOLER REGARDING PREVENTION OF BRONCHITIS

Table-7: Post test knowledge score of mothers with preschooler regarding prevention of bronchitis; N=50

Level of Knowledge	Score	No of Respondents (%)	
		No	%
Inadequate	< 50%	0	0
Moderate	51--75%	5	10
Adequate	>76%	45	90
Total		50	100

Table 7 illustrate post test knowledge scores of mothers with preschooler regarding prevention of bronchitis. During post test, 90% of mothers had adequate level of knowledge remaining 10 % of them had moderate level of knowledge and none of them had inadequate level of knowledge regarding prevention of bronchitis.

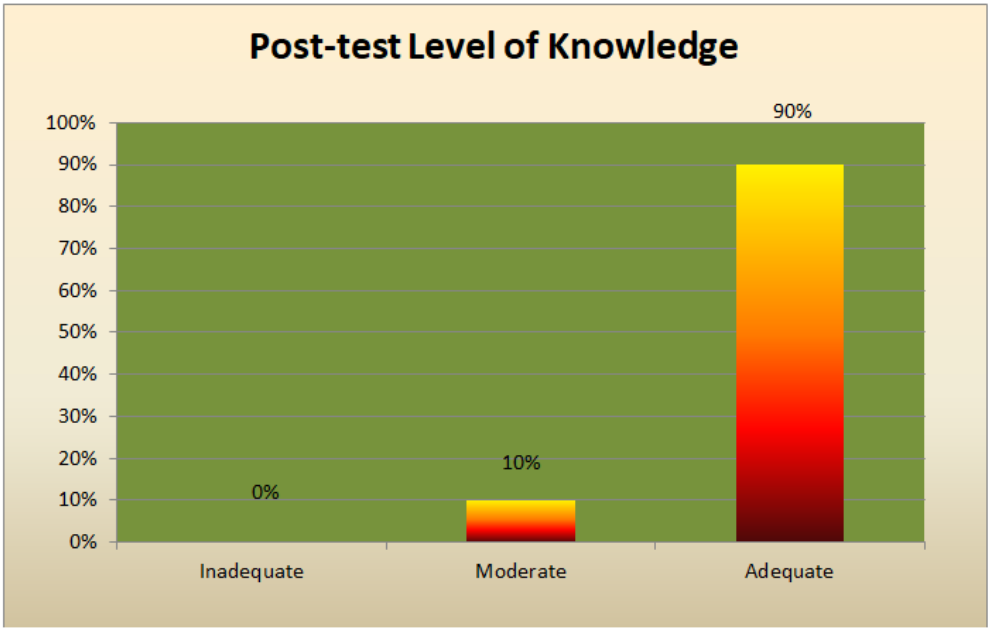

Figure-13: Post-test knowledge score of mothers with preschooler regarding prevention of bronchitis

ASPECT WISE MEAN POST-TEST KNOWLEDGE SCORES OF MOTHERS WITH PRESCHOOLER REGARDING PREVENTION OF BRONCHITIS

Table-8: Aspect wise mean post-test knowledge scores of mothers with preschooler regarding prevention of bronchitis; N=50

Aspects wise knowledge	Max Statement	Max Score	Range	Mean	SD
General information of bronchitis	14	14	9-14	12.46	1.54
Prevention of bronchitis	16	16	8-16	13.94	2.06
Overall	30	30	17-30	26.4	3.6

Table 8 describes aspect wise mean and SD post test knowledge score of mothers regarding prevention of bronchitis. In the aspects of knowledge on general aspects of bronchitis the mothers had mean score of 12.46 with SD1.54. Mothers had mean score of 13.94 with SD 3.6 in the aspects of prevention of bronchitis. The overall mean and SD were 26.4 and 3.6 respectively.

SECTION –III (A)
EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING PREVENTION OF BRONCHITIS AMONG MOTHERS WITH PRESCHOOLER.

Table-9: Effectiveness of structured teaching programme regarding prevention of bronchitis among mothers with pre-schooler; N=50

Aspect wise knowledge	Knowledge of respondents				Paired 't' test
	Pre-test		Post-test		
	Mean	SD	Mean	SD	
General information of bronchitis	6.28	3.72	12.46	1.54	9.34*
Prevention of bronchitis	8.61	2.39	13.94	2.06	6.57*
Overall	14.89	6.11	26.4	3.6	16.81**

**Significant at P<0.01 level, df 49, table-value 2.6

Table-9 describes the effectiveness of STP on prevention of bronchitis among mothers with preschooler. It is inferred that the overall paired 't' test value was 16.81 it is significant in table value. So it is proved that the STP was effective in improving knowledge of mothers regarding prevention of bronchitis.

The obtained't' value was higher than the table value.

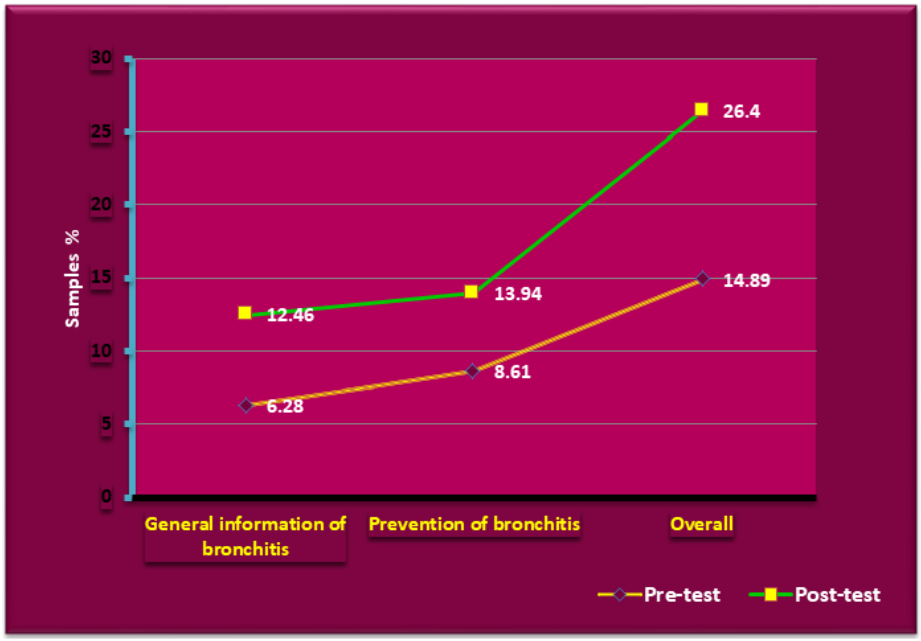

Figure-14: Effectiveness of structured teaching programme regarding prevention of bronchitis

SECTION-IV:
COMPARISON BETWEEN PRE-TEST AND POST-TEST LEVEL OF KNOWLEDGE OF MOTHERS WITH PRESCHOOLER REGARDING PREVENTION OF BRONCHITIS.

Table-10: comparison between pre-test and post-test level of knowledge regarding prevention of bronchitis among mothers with pre-schooler; N=50

Level of knowledge	Score	Pre test		Post test	
		No	%	No	%
Inadequate	< 50%	34	68	0	0
Moderate	50--75%	16	32	5	10
Adequate	>76%	0	0	45	90
Total		50	100	50	100

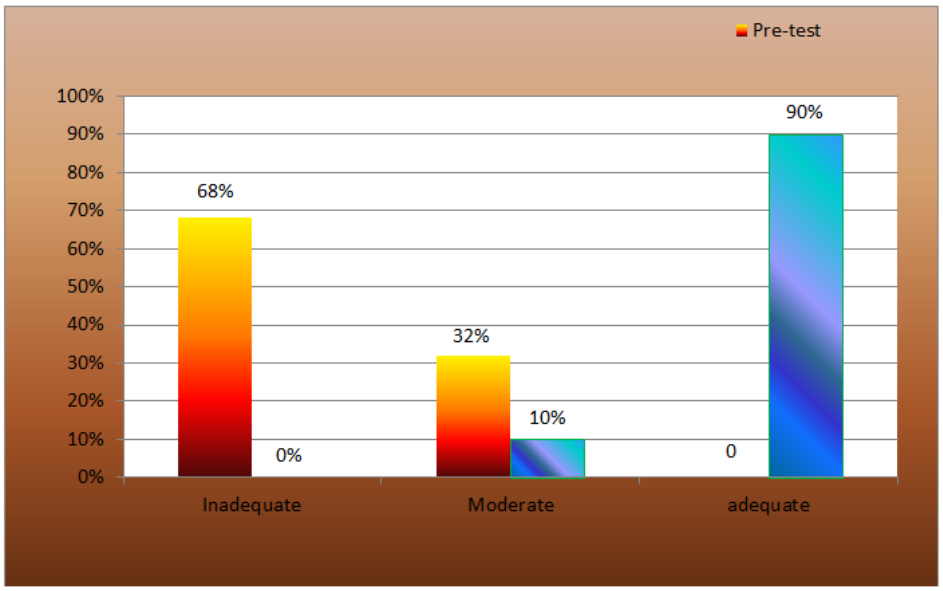

Figure-15: Comparison between pre-test and post-test score

SECTION-VI (A)

ASSOCIATION BETWEEN PRE-TEST KNOWLEDGE SCORES OF MOTHERS WITH PRESCHOOLER WITH THEIR SELECTED SOCIO DEMOGRAPHIC VARIABLES

Table-11: Association between pre-test knowledge scores of mothers with preschooler with their selected socio demographic variables; N=50

Characteristics	Category	N	Level of Knowledge		Chi square χ^2
			Inadequate Knowledge	Moderate Knowledge	
Age in Year	18-23years	8	5	3	0.46 NS
	24-29 years	21	14	7	
	30-34 years	16	11	5	
	Above 35 years	5	4	1	
Religion	Hindu	34	23	11	0.10 NS
	Muslim	4	3	1	
	Christian	12	8	4	
	Others	0	0	0	
Educational status	Primary education	9	2	7	21.75 S*
	Secondary education	19	19	0	
	Under graduate	15	7	8	
	Post graduate or above	7	6	1	
Occupational status	Business	14	9	5	2.29 NS
	Private employee	12	10	2	
	Government employee	6	3	3	
	House wife	18	12	6	
Monthly Family income	Rs 5000-10000/-	16	13	3	4.97 NS
	10001-15000	21	15	6	
	15001-20000	8	3	5	
	Above 20001	5	3	2	
Type of family	Nuclear	16	11	5	0.47 NS
	Joint	22	14	8	
	Other	12	9	3	
Number of children	1	15	7	8	13.61 S*
	2	22	21	1	
	3 or above	13	6	7	
Previous knowledge	Yes	38	32	6	19.12 S*
	No	12	2	10	
Source of information	Mass media	8	1	7	31.23 S*
	Health personnel	12	9	3	
	Family and friends	5	0	5	
	Nil	25	24	1	

**Significant at P<0.05 level, NS: Non significance, S*: significance

Table-11 describes the association between pre-test knowledge scores of mothers with preschooler with their selected socio demographic variables. The chi-square value of the pre test level of knowledge of mothers were significant at p<0.05 level. It showed that there was significant association between educational status, number of children, previous knowledge and source of information with the level of knowledge of mothers regarding prevention of bronchitis. Hence hypothesis H_2 is accepted.

DISCUSSION

This chapter discusses the major findings of the study with reference to the objectives and hypothesis stated and reviews them in relation to findings from the results of other studies.

The aim of this study was to evaluate the effectiveness of STP on prevention of bronchitis among mothers with preschooler in selected Hospitals, Bagalkot.

The objectives of the study were to

- Assess the existing level of knowledge of mothers with preschoolers children regarding prevention of bronchitis
- Evaluate the effectiveness of STP on prevention of bronchitis among mothers with preschooler
- Find out the association between pre-test level of knowledge of mothers with preschooler and their selected socio-demographic variables.

Hypothesis

H_1- There is a significant difference between mean pre-test and post-test knowledge scores among mothers regarding prevention of bronchitis.

H_2- There is a significant association between mean pre-test knowledge scores of mothers and their selected socio-demographic variables.

1. Assess the existing level of knowledge of mothers with preschooler regarding prevention of bronchitis

During pre test, majority of the mothers 68% (34) had inadequate level of knowledge regarding prevention of bronchitis, 32% (16) of them had moderate level of knowledge regarding prevention of bronchitis. The finding of the present study is supported by the findings of the following studies.

A study was conducted to assess the knowledge regarding prevention of bronchitis among mothers with preschooler in a rural area of western china. 1240 mothers were recruited from rural area of western china. Information was collected with an interviewed-administrated semi-quantitative questionnaire. The result revealed of mothers had inadequate knowledge regarding prevention of bronchitis. This study concluded that there is a great need of educational programme to improve the knowledge of mothers in this area.

The findings of the present study as well as previous studies showed that the knowledge of married women were inadequate and measures have to be undertaken to improve their knowledge level.

2. Evaluate the effectiveness of STP on prevention of bronchitis among mothers with preschooler

The obtained paired't' value was which was highly significant at p<0.01level. It is inferred that mothers had significantly improved their knowledge after structured teaching programme on prevention of bronchitis. So it is proved that the STP was highly effective in improving knowledge of mothers with pre schoolers children regarding prevention of bronchitis.

The finding of the present study is supported by the findings of the following studies.

Another study conducted to assess the effectiveness of education programme on prevention of bronchitis. In this quasi-experimental controlled study, 110 mothers with preschooler were referred to urban centers in gonabad in 2009 were included in two case (54) and control (56) groups. Pre test data was collected in two studied groups by a self administered questionnaire. The intervention was done on experimental group on prevention of bronchitis and control group has not received any education. Post test data was collected and showed that the education was successfully effective to increase the knowledge of mothers in experimental group regarding prevention of bronchitis.

The present study and previous studies clearly showed that structured teaching programme on prevention of bronchitis was effective in improving the knowledge of mothers with preschooler.

3. Find out the association between pre-test level of knowledge of mothers with preschooler and their selected socio-demographic variables.

The chi-square value of the pre test level of knowledge of mothers was significant at p<0.05 level which showed that there was significant association between religion, educational status and source of information with the level of knowledge of mothers regarding prevention of bronchitis.

The finding of the present study is supported by the findings of the following studies.

A study was conducted on knowledge and attitude of mothers regarding prevention of bronchitis among 75 mothers in Madurai. Researcher used structured interview schedule and likert scale to assess the knowledge and attitude of mothers. Researcher found out that 36 (48%) of mothers had inadequate knowledge and 39 (62%) of mothers had adequate knowledge. 38 (50.6%) of mothers had unfavourable attitude and 37 (49.4%) of mothers had favourable attitude towards prevention of bronchitis. High positive correlation found between knowledge and attitude scores of mothers about prevention of bronchitis. Significant association (p<0.05) was found between knowledge score of mothers with their education and family monthly income. Significant association (p<0.05) was found between attitude score of mothers with their education and previous knowledge.

The present study and previous studies clearly showed that there was significant association between knowledge of mothers with preschooler regarding prevention of bronchitis and their selected socio demographic variables.

CONCLUSION

Children represent the future and ensuring their healthy growth and development ought to be a prime concern of all societies. Children constitute large sections of the population in India. Children are the wealth of tomorrow.

Bronchitis is one of the major reasons for which children are brought to the hospitals and health facilities. Bronchitis is inflammation of the bronchus; it can be acute or chronic condition. It usually begins with the symptoms of cold, runny nose, dry cough and when prolongs then coughs with sputum production.

As mothers are the primary care givers of the child, strategies to promote knowledge of the mother about common childhood diseases should be given important and it will be able to make a significant difference in the prevalence of disease affecting the health of the children.

Based on the findings of the study the investigator felt that it was necessary to improve the knowledge level of prevention of bronchitis among the mothers. A structured teaching programme has been prepared to increase the awareness of mothers regarding prevention of bronchitis.

FINDINGS

The findings of this study showed that in pre test majority of the mothers 68 % (34) had inadequate level of knowledge regarding prevention of bronchitis, 32% (16) of them had moderate level of knowledge regarding prevention of bronchitis whereas in post test all mothers had showed improvement in their knowledge, 90 % (45) of them had adequate level of knowledge and 10 % (5) of them had moderate level of knowledge regarding prevention of bronchitis. This showed that the STP was effective in improving the knowledge of mothers regarding prevention of bronchitis. The chi-square value of the pre test level of knowledge of mothers with their selected socio-demographic variables were significant at $p<0.05$ level. It showed that there were significant association between the level of knowledge of mothers with educational status, number of children, previous knowledge and source of information.

Implications of the study

The finding of the study has implications for nursing education, nursing practice, nursing research and nursing administration.

Nursing education

- To enhance the knowledge level on prevention of bronchitis among mothers with preschooler.
- Nursing curriculum should in co-operate activities like preparation of STP and should give importance to health education.
- Seminar, symposium and workshops can be organized regarding prevention of bronchitis and to improve the quality care of children.
- In-service education should be conducted to improve the knowledge and skills of health care professionals.

Nursing Practice

Teaching to the patient's family and care giver is one of the important aspects in the health care delivery system. Health education improves the caregiver's knowledge on prevention of bronchitis. STP once developed and evaluated for its effectiveness can further be modified to teach others.

Nursing research

Research should be continued on newer practices and method of teaching focusing on effective interventions. The study will serve as a valuable reference material for future investigations. Further research studies can be conducted on the basis of this study.

Nursing administration

- Nursing administers should implement seminars to make public awareness about prevention of bronchitis
- In service education for the staff nurse regarding prevention of bronchitis in order to update and impart their knowledge.
- The nursing administrators to plan for man power, money, materials, methods and time to conduct successful health education regarding prevention of bronchitis in public.

Suggestions

1. The health professionals should assess periodically the knowledge of knowledge of mothers regarding prevention of bronchitis.
2. Nurses should update their knowledge constantly in order to help mothers to keep track on importance of prevention of bronchitis.
3. Several programmes should be conducted in the hospitals and community in order to encourage the mothers to have good knowledge regarding prevention of bronchitis.

Recommendations for further research

Based on the findings of the present study and keeping in mind the limitations of the study, the following suggestions are offered to conduct studies on

- The similar study can be conducted in larger samples.
- A similar study can be undertaken by utilizing other domains like practice.
- A similar study can be conducted by using different teaching methods.
- Similar study can be conducted among mothers to identify their knowledge, attitudes and practices regarding prevention of bronchitis.

Limitation of the study

1. The study is limited to mothers with pre schoolers children in Sri Ram and Niranjan Hospitals of Bangalore
2. The study is limited to 50 mothers with preschooler.
3. This study is limited to 4 weeks of data collection.

SUMMARY

This chapter provides the process employed in this study. The primary aim of this study was to assess the knowledge regarding prevention of bronchitis among mothers with pre schoolers children and to find association between the knowledge level with selected demographic variables.

The objectives of the study were to

- Assess the existing level of knowledge of mothers with preschoolers regarding prevention of bronchitis

- Evaluate the effectiveness of STP on prevention of bronchitis among mothers with preschooler
- Find out the association between pre-test level of knowledge of mothers with preschooler and their selected socio-demographic variables.

The study attempted to examine the following assumptions

- Mothers may have some knowledge regarding prevention of bronchitis
- STP may enhance the knowledge of mothers regarding prevention of bronchitis
- Socio-demographic variables may influence the knowledge level of mothers regarding prevention of bronchitis

The study was attempted to examine the following hypothesis

H_1- There is a significant difference between mean pre-test and post-test knowledge scores among mothers regarding prevention of bronchitis

H_2- There is a significant association between mean pre-test knowledge scores of mothers and their selected socio-demographic variables

The conceptual frame work of the present study is based.

A review of literature enables the investigator to develop the conceptual frame work, methodology for the study and to plan for the data analysis in the most effective and efficient way. The investigator organized the ROL under the following sections.

1. Review related to incidence and prevalence of bronchitis
2. Review related to etiological factors of bronchitis
3. Review related to knowledge of mothers regarding bronchitis
4. Review related to effectiveness of structured teaching programme

The research approach used for this study was a comparative survey approach and Research design was descriptive research design.

The Setting for the study was HSK Hospital and Shanti Hospital, Bagalkot.

The Sample consists of 50 mothers with preschooler from HSK Hospital and Shanti Hospital, Bagalkot. each sample is selected by using non probability convenient sampling technique.

The variables in the study are as follows;

1. Demographic variables

In this study the demographic variable includes the characteristic of mothers such as Age, religion, Educational status, socioeconomic status, Occupational status, Type of family, Number of children, and source of information regarding prevention of bronchitis

2. Dependent variables

In this study the dependent variable is the knowledge of mothers with preschooler regarding prevention of bronchitis.

3. Independent variable

- In this study the independent variable is structured teaching programme on prevention of bronchitis
- The tool used for the study was structured knowledge questionnaire regarding prevention of bronchitis.
- Level of knowledge was assessed on the in to 3 levels inadequate, moderate and adequate.
- The tool was validated by experts and their suggestions were incorporated.
- The split half method was used for determining the reliability of the tool. The reliability value of the tool for knowledge questionnaire was r=0.88 which indicates high degree of reliability.
- Pilot study was conducted among 5 mothers with pre schoolers children and the pilot study was feasible.
- Main study was conducted among 50 mothers with preschooler from HSK Hospital and Shanti Hospital, Bagalkot. The collected data was analysed and interpreted by using descriptive and inferential statistics.

Major findings of the study

Among 50 mothers with preschooler the higher respondents (42%) found in the age group of 24-29 years, 68% of them were Hindus, majority of the mothers 44% belongs to joint family, most of the mothers 38% completed secondary education, 36 % of them are house wife's, 24% of them have no previous knowledge and 50 % of the mothers has no access to information.

In this study, majority of the mothers 68% were having inadequate level of knowledge regarding prevention of bronchitis, 32% of mothers have moderate level of knowledge and no one has adequate level of knowledge during pre-test.

During post-test, 90% of mothers have adequate level of knowledge and 10% of mothers have moderate level of knowledge regarding prevention of bronchitis.

The obtained paired 't' value was 16.81which was highly significant at 0.01level. It is inferred that mothers with preschooler had significantly improved knowledge after administration of STP on prevention of bronchitis. So it is proved that the STP was highly effective in improving knowledge of mothers with pre schoolers children on prevention of bronchitis.

The chi-square value of the pre-test level of knowledge of mothers were significant at $p<0.05$ level. It showed that there was significant association between

educational status, number of children, previous knowledge and source of information with the level of knowledge of mothers with pre schoolers children regarding prevention of bronchitis.

SUMMARY

This chapter deals with the discussion of main finding of the present study, with regard to the objective of the study, hypothesis and other studies as per the review of literature. The next chapter deals with the bibliography drawn based on the findings of this study.

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LIST OF ABBREVATIONS USED

Abbreviation	Expansion
STP	STRUCTURED TEACHING PROGRAMME
SD	STANDARD DEVIATION
χ^2	CHI SQUARE TEST
MCQ	MULTIPLE CHOICE QUESTION
WHO	WORLD HEALTH ORGANIZATION
ROL	REVIEW OF LITERATURE

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