ISSN No:-2456-2165

Effectiveness of Planned Teaching Program on Knowledge Regarding Prevention of Acute Respiratory Tract Infections Among Mothers of Under Five Children Attending ICDS Centre, West Bengal

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ISSN No:-2456-2165

DECLARATION

I hereby declare, that the dissertation entitled "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal" is the outcome of the original research work undertaken and carried out by me, under the guidance of Smt. Usha Bir, Professor, College of Nursing, Asia Heart Foundation, Kolkata and Smt. Kuntal Mandal, co-guide, Associate Professor, College of Nursing, Asia Heart Foundation, Kolkata. I also declare that the material of this dissertation has not formed in any way the basis for award of any Degree or Diploma in this university or any other University.

Signature of candidate
(Shaikh Afruja Sultana)

Shaikh Afruja Sultana

Place: Kolkata
Date: 7th April' 2015

ISSN No:-2456-2165

CERTIFICATE

Certificate that the work embodied in this Dissertation entitled "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal." is original and bonafied work, which has been carried out by Shaikh Afruja Sultana, M. Sc Nursing Student of College of Nursing, Asia Heart Foundation, Rabindranath Tagore International Institute of Cardiac Sciences, Kolkata for the partial fulfillment of the course requirement for the degree of Master in Nursing from the West Bengal University of Health Sciences, Kolkata.

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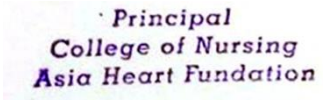

ISSN No:-2456-2165

ACKNOWLEDGEMENT

The investigator felt God Almighty's presence throughout this study. It was his abiding grace which made this study possible.

It is her privilege to extend her deep sense of gratitude to Mrs, Sumita Datta, Principal, College of Nursing, Asia Heart Foundation for her assistance, encouragement and support given throughout the study.

The present study has been undertaken with the expert guidance and supervision of Mrs. Usha Bir, College of Nursing, Asia Heart Foundation and Smt. Kuntal Mandal, College of Nursing, Asia Heart Foundation. Without their sustained interest, valuable guidance, creative suggestion, constant encouragement and support, this study would not have been possible. The investigator extends her heartfelt gratitude for their unflinching guidance and continuous moral support to complete her study. She is extremely grateful and offers her deep sense of gratitude to Mrs. Usha Bir for her patience and guidance at the time, when it was needed.

Investigator owes her deepest gratitude to research co-ordinator Mrs. Kasturi Mandal fot her untiring guidance, impressive ideas, constant encouragement and motivation in every step of this study. She thanks her immensely for sparing her valuable time and for listening patiently to each of the problems the investigator encountered during the course of her study.

She would also like to express her deep gratitude to the entire faculty of the Masters of Nursing programme for their valuable suggestions, constructive criticisms, words of encouragement and timely help which has contributed towards the successful completion of this study.

Her sincere gratitude is tendered to all experts who gave their valuable opinions for validating and refining the data collection tool.

Investigator would like to thank Mr. Prabal Kanti Banerjee, Assistant teacher, Sonarpur Vidyapith, Sonarpur, who despite his busy schedule, helped her in translating the tool from English to Bengali.

She would like to thank MrsSibani Datta Chattopadhyay, Assistant teacher, Sonarpur Vidyapith, Sonarpur, who despite his busy schedule, helped her in translating the tool from Bengali to English.

Investigator would like to tender her gratitude to Mr. Suhrit Das, ICDS project officer for allowing her to carry out her reliability test, pilot and final study.

She would like to tender her gratitude to MrsMitaPyne Dutta, ICDS Supervisor, who helped the investigator to select the ICDS centres for reliability test, item analysis, pilot and final study.

She would like to thank Mrs. Anima Baidya, ICDS Worker, nischindpur, Sonarpur for interrater reliability testing, because she was a rater.

She would like to offer her sincere thank Mrs Farida bibi, ICDS Worker, Balaksangha club, Shimultala for help in item analysis.

She would like to tender her gratitude to ICDS workers (Mrs. Afsana sardar for pilot study and Mrs. Krishna Majumder and AlpanaBairagi for final study) and helpers of selected ICDS centres under Ward no-11 and 9 for their co-operation, during the period of data collection.

Investigator' offer of sincere thanks goes to the participants who willingly agreed to participate in the study this contributing to the successful completion of the study.

She would like to thank Sheila Bhattachariyya, Lecturer, College of Nursing, Asia Heart Foundation, who despite her busy schedule, helped her in editing the dissertation.

She wishes to take the privilege of expressing her thanks to the Librarians of the College of Nursing, Asia Heart Foundation, Kolkata for their precious assistance in reviewing the literature for the study,

Investigator offers her special thanks goes to Mr. Dibakar Majumder for giving shape to her study with the computer works and print outs.

ISSN No:-2456-2165

Investigator would like to express her deepest gratitude and heartfelt thanks to her parents, elder brother and two younger brothers for their continued sacrifice, encouragement and support throughout the study period of the successful completion of the study.

She sincerely extends her special thanks and warm appreciation to all friends, relatives, well-wishers who have supported her directly and indirectly, in the completion of this study.

Shaikh Afruja Sultana

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"Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

Shaikh Afruja Sultana

College of Nursing, Asia Heart Foundation
2015

In partial fulfillment of the requirement for the Degree of Master of Science in Nursing from West Bengal University of Health Sciences, West Bengal

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ISSN No:-2456-2165

ABSTRACT

The study is entitled "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal." Investigator adopted pre-experimental approach with one group pre-test post testresearch design. Data was collected with interview schedule from 100 mothers from two selected ICDS centresby non-probability convenient sampling technique.

After providing planned teaching programme the study result showed that the mean difference(8.18) between pretest knowledge score and post test knowledge score were higherand was statistically significant, as evident fromt value (19.48*) for knowledge which was much greater than$t_{(99)}$ ($t_{(120)}$ value =3.37 < $t_{(99)}$<'t'$_{(60)}$ = 3.46)at 0.001 level of significance. Results of the study proved that the teaching programme was highly effective in enhancing the knowledge of mothers on prevention ARI in children.**

There was significant association between pre-test knowledge score and age(X^2=16.28, P<.01), educational status(X^2=16.65**, P<.01), monthly family income(X^2=11.81**, P<.01), no. of children(X^2=9.14**, P<.01), received information regarding prevention of ARI(X^2=5.78**, P<.01), sources of information(X^2=34.59***, P<.001).**

Study has implication on community health nursing practice and nursing research. Study can be repeated with a larger sample, in rural setting with other teaching strategies.

ISSN No:-2456-2165

CHAPTER ONE
INTRODUCTION

"*The childhood shows the man as morning shows the day*"

-- John Milton

Children are an embodiment of our dreams and hopes for the future. They are like the wet clay in the potter's hands. Handled with care they become something beautiful, else they break and become discarded. They are the most vulnerable group in the society. Children are not only our future, they are our present and we need to start taking their voices very seriously, Children are a priceless resource and any nation which reflects them would do so as its perils.

Small children can die from the effects of acute respiratory infection within a matter of few days. Case fatality rates are higher in young infants and malnourished children. Under 3 years of age boys are affected more often and more severely. [(1)]

Children are particularly vulnerable to respiratory conditions for a number of reasons, involving features of their developmental stage, physical differences from adults and aspects of their behavior. Developmentally, a child's respiratory anatomy is immature. The infant's lungs are not fully developed at birth. Although bronchiolar branching is complete early in fetal life, alveolar development and cellular differentiation of lung tissue continues into adolescence. There is about a 23-fold increase in lung volume from birth (150-200 ml) to adulthood (5,000 ml) translating into a comparable increase in absorptive surface area. There are also physical reasons that children are more vulnerable. Smaller lungs mean a relatively higher surface area to volume ratio, such that children are already absorbing a greater volume of contaminants relative to their body size, compared to adults. Also, a child's breathing rate is faster than that of an adult, so every minute they exchange more air per kilogram of body weight. Older children in particular display the maximum air intake because of their greater activity levels. Being smaller in size, a child's breathing zone is much lower than that of an adult. Some heavier contaminants, such as pesticides or automobile exhausts, are typically present in a vertical gradient, being in higher concentration closer to the ground, therefore closer to the child's breathing zone. [(2)]

In India, during the year 2011, about 26.3 million cases of ARI were reported which gives an incidence rate of about 2,179 cases per lakh population. Pneumonia cases were about 7.15 lakh, with incidence rate of 59 cases per lakh population. Pneumonia was responsible for about 18 percent of all under 5 years' death in India [(3)].5000 under-5 children die in India everyday: UNICEF. [(4)]

Acute Respiratory Tract Infection is more common in preschool children attending day care centres. The infections tend to be more common in urban communities than in rural communities. [(1)]

All the causative organisms that are bacteria (Hoemophilusinfluezae, Klebshiella pneumonia, Streptococcus pneumonia, Streptococcus pyogens), virus (Adeno virus, measles virus, Respiratory syncytial virus, Rhinovirus), are normally transmitted by the airborne route. The chain of transmission is maintained by direct person to person and contact by droplets of moisture expelled from the upper respiratory tract through sneezing or coughing. [(1)]

- *Background of the Study*

'More than 150 million episodes of childhood pneumonia occur every year in the developing world, accounting for more than 95% of all new cases worldwide. Between 11 and 20 million children with pneumonia are hospitalized and more than 2 million die every year.'*Wardlaw T et al 2006*

Child Population, with described as population by the Cencus of India refer to children in the age-group 0-6 years. It is very important to have an accurate statistical data in respect of the population of this age-group for framing policies and programmes in the education sector, health sector and others. The child population comprises of 13.12% of the total population of the country as per Census 2011, while the child population in Mizoram has recorded 15.17% of the total population of the state. [(5)]

Acute Respiratory Tract Infection, diarrhoeal diseases and malnutrition are the most common causes of illness and deaths, among children in developing countries. So, Acute respiratory infection (ARI) in under-five children is one of the main public health problems in India. It is the major cause of morbidity and mortality in infants and young children below age five. Cough is usually the main symptom. Other symptoms include fever, headache, aches and ARI is mainly seen during winter season. [(1)]

Every year ARI in young children is responsible for an estimated 3.9 million deaths worldwide. ARI contributes to 15-30 % of all under five deaths in India and most of these deaths are preventable. [(1)]

Singh A, Singh MN conducted a study on Diarrhea and acute respiratory infections among under-five children in slums and analyzed information on 2687 under-5 children living in urban slums located in eight selected India cities. Apart from bivariate analysis, logistic regression analysis was performed to identify factors associated with diarrhea and ARI among slum children.

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The study result revealed that the prevalence of diarrhea and ARI was about 8% and 8.5%, respectively. ARI is associated with age, birth weight, religion, caste, education, family type, safe water, improved toilet, mass-media exposure, region and separate kitchen. Older children and children with normal birth weight are less likely to suffer from ARI. Children from 'Other' religions and OBC that is 39% [CI=1.000-1.924] and 49% [CI=1.008-2.190], respectively, are more likely to suffer from ARI. Parents' education is strongly associated with the prevalence of ARI. Exposure to mass media reduces the likelihood of ARI to 50%, compared to the situation when a mother of the child did not have any exposure to mass-media [CI=0.324-0.819]. **(6)**

Mitra Nilanjan Kumar carried out a longitudinal study on ARI among under five children at Durgarampur village; Singur Block; District Hooghly .63 children were followed up with periodic home visits at two weeks interval for six months. Frequencies of ARI episodes were studied and associations with study variables were analyzed. Overall incidence density rate of ARI episodes was 19.57 /100 person per months at risk. Incidence was highest in infants (23.9/100 person-months). Risk ratio analysis showed the ARI episodes noted among children belonging to low socio-economic class (< Rs. 1000/- per month); risk ratio - 3.19, dwelling in a space where indoor atmosphere is polluted with smoke nuisance; risk ratio - 2.15, having low birth weight (<2.5 kgs); risk ratio - 4.25, who were not exclusively breastfed; risk ratio - 3.57, who were not normally nourished; risk ratio - 2.04, who were not fully immunized; risk ratio 2.76**.(7)**

ChoubeAtul, Kumar Bhushan, Syed Esam Mahmood, Srivastava Anurag conducted a cross sectional study on Potential risk factors contributing to acute respiratory infections in under five age group childrenin the rural area of Moradabad district, Uttar Pradesh. This study was carried out among 278 under-five children. Out of the 278 children, 27.69% were suffering from ARI. Majority of those with ARI were males (74.02%) and were aged between 12 to 47 months (59.74%). The percentage of ARI was significantly higher (<.001) among children having low birth weight, and those not exclusively breastfed. The percentage of ARI was also significantly higher among children having no smoke outlet in their houses (<.05), those with dampness in their houses (<.001) and among those having pets (<.05).**(8)**

Prajapati Bipin, NitibenTalsania, KNSonaliya conducted a cross sectional study on the prevalence of ARI among 500 under five children in urban and rural communities of Ahmadabad District, Gujarat. This study result revealed that prevalence of ARI was 22%. Prevalence of ARI in urban area was 17.2% as compared to 26.8% of prevalence of ARI in the rural area. Out of 500 children, about 55% prevalencewere seen in one to four years of age, 33.2% were below age of one year and 12% were between four to five years of age**. (9)**

Savita MR et al , conducted a community based study to investigate modifiable risk factors for acute respiratory tract infections in children at Cheluvamba Hospital, Mysore which is a referral centre. A cohort of 91 children under threeyears age was followed up for one 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 91.3% of children were simple cough and cold. 8.2 % of children developed pneumonia and only 0.51% of children had severe pneumonia. There was no significant difference in incidence among various age groups. **(10)**

An acute respiratory infection (ARI) is one of the leading causes of childhood mortality. Estimates of the number of children worldwide who die from ARI are needed in setting priorities for health care. To establish a relation between deaths due to ARI and all-cause deaths in children under fiveyears, it is seen that the proportion of deaths directly attributable to ARI declines from 23% to 18% and then 15% (95% confidence limits range from ±2% to ±3%) as under-five mortality declines from 50 to 20 and then to 10/1000 per year. Much of the variability in estimates of ARI, in children is shown to be inherent in the use of verbal autopsies. This analysis shows that throughout the world 1·9 million (95% CI 1·6–2·2 million) children died from ARI in 2000, 70% of them in Africa and Southeast Asia. (11)

The WHO (2008) report cited and categorized the risk factors of ARI as: (i) Definite risk factors: malnutrition (weight-for-age z-score < -2), low birth weight, lack of exclusive breastfeeding during first four months, lack of measles immunization, indoor air pollution, crowding; (ii) Likely risk factors: parental smoking, zinc deficiency, maternal inexperience, co-morbidities; and (iii) Possible risk factors: maternal illiteracy, day-care attendance, rainfall (humidity), high altitude (cold air), vitamin A deficiency, higher birth order, outdoor air pollution**.(12)**

Gupta Neeru et al conducted a cross sectional study on evaluation of diarrhoeal disease and acute respiratory infections control programme in a Delhi slum. Out of 1307, 191 (14.6%) had an attack of ARI in the preceding two weeks. Among them a maximum of 78% had mild running nose, 76.4% had cough, 45.5% had fever and minimum 4% had fast breathing.ARI morbidity rate per child (annual rate) was significantly higher in infants. 80% (152) of mother had sought treatment for ARI. Among them half of the mothers that is, 49% took the child for ARI treatment to private hospital, 31% mothers consulted a government doctor, 20% mothers did not consult any doctor at all. **(13)**

Acharya D, Prasanna KS, Nair S, Rao RS conducted a prospective community based study on Acute respiratory infections in 288 children aged 0-2 years in he town Sismiut, Greenland. Children were monitored weekly, and episodes of upper and lower respiratory tract infections were registered. Risk factors 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 infections included exposure to passive smoking and sharing a bedroom with children aged 0-5 years. The population attributable risk of LRTIs associated with passive smoking and carecentre was 47% and 48% respectively. **(14)**

- *Need of the Study*

ARI is an important cause of morbidity and mortality in the children. On an average, children below five years of age suffer about five episodes of ARI per child, per year, thus accounting for about 238 million attacks. In India, during the year 2008, about 27.4 million cases of ARI were reported which gives an incidence rate of about 2394 cases per one lakh population. Pneumonia cases were about 7.32 lakh, with incidence rate of about 64 cases per one lakh population. During 2009 about 2318 people died of pneumonia. Pneumonia was accounted for about 20 % of all 'under fiveyear' deaths in India. (2)

According to a report on the causes of infant deaths in India by Registrar General of India, in 2001-03, 22% of infant deaths were caused by respiratory infections. However, as per the WHO- UNICEF Report- 'Countdown to 2015,'' as on 2012, 23% of deaths occurred due to pneumonia in the under five age population. (15)

There is more evidence of the seriousness of the problem in India: According to recent findings on child mortality published in the Lancet in April 2013,more than two lakh children in India died because of diarrhoea and pneumonia in 2011.(16)

Sherene G Edwin conducted a study on the effect of planned teaching program on knowledge, attitude and knowledge on practice of Acute Respiratory Tract Infection among mothers of under-five children suffering from ARIs, who visited the outpatient department of the two hospitals at Trichy. Sixty mothers (30 each in experimental and control group) were selected by non-probability convenient sampling technique.

Study results revealeda gross inadequacy (100%) of knowledge regarding ARIs among mothers in both the groups. The mean post test knowledge score (17.15) was lower than the mean pre-test knowledge score (17.16) in control group, with a mean difference of 0.1 and paired' test value was 3, which was found statistically non significant at 5% level. The mean post test knowledge score (65.56) was significantly higher than the mean pre-test knowledge score (18.2) in experimental group with mean difference of 47.36. The calculated't' value of knowledge score in experimental group was 38.345***.The study concluded that the health education imparted to the mothers which had an effect on their knowledge regarding acute respiratory tract infections had a great potential for accelerating the awareness among the mothers on various groups in knowledge score. (17)

Sharma Dhananjaya, KuppusamyKumaresan, Bhoorasamy Ahok cnducted a study on Prevalence of acute respiratory infections and their determinants in under five children in urban and rural areas of Kancheepuram district, South India. The prevalence of ARI was found to be 27%. ARI was noticed more among low social class (79.3%), illiterate mothers (37.8%), those living in kutcha houses (52.6%), those overcrowded houses (63.7%), those who used smoky fuel for cooking (67.4%), those who had inadequate cross ventilation (70.4%), those who had history of parental smoking (55.6%), those with low birth weight children (54.8%), and malnourished children (57.8%). The rural children (62.2%) were more affected than the urban children. These observations emphasized the need for research aimed at the health system to determine the most appropriate approaches to control acute respiratory infection and thus could be utilized to strengthen the ARI control programme.**(18)**

D' souza Asha et al conducted a study on knowledge of mothers regarding prevention and management of respiratory tract infection in children in the rural community area, Mangalore. This evaluative study revealed that 14% of mothers had adequate knowledge, 84% had infection in children with mean pre-test knowledge score of 14.12 and mean percentage 47.06. In post-test, 14% of mothers had excellent knowledge, 80% of mothers had adequate knowledge, 6% of mothers had average knowledge regarding respiratory tract infection in under five children with mean knowledge scores 21.04 and mean percentage 70.13%. This study had clearly shown the importance of mother's education and it is therefore, highly recommended the education of the mothers about early detection and management of ARI in children. **(19)**

Moving along with the acute respiratory infection control programme since 1978 the health professional's efforts should be directed towards charting a better healthier future for humanity, a future in which millions of children no longer face death in infancy and childhood. To make such a change present day, our challenge is to gain a better understanding that makes a difference in the prevalence of problems affecting the health of the children. Family members especially the mother's have an important role in the preventive aspects and through that health promotion in their children.

From the above research studies and investigator's community experience, it is evident that irrespective of their educational status mother's knowledge on child care is to be enhanced. The investigator felt the need to boost the mother's knowledge on prevention of acute respiratory tract infections. So, the investigator was inspired to conduct this study.

➢ *Problem Statement*

"Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

- *Objectives*
- *General Objective*

To develop and find the effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre.

- *Specific Objectives*

✓ To develop and validate the planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre.
✓ To assess the knowledge of mothers regarding prevention of Acute Respiratory Tract Infections before and after administration of planned teaching program.
✓ To find the effectiveness of planned teaching program on prevention of Acute Respiratory Tract Infections in terms of gain in post test knowledge score.
✓ To find the association between the pre test knowledge score and selected variables.

➢ *Variables of the Study*

- *Independent variable:*

Planned Teaching Program on prevention of Acute Respiratory Tract Infections.

✓ *Dependent variables:*

Knowledge on prevention of Acute Respiratory Tract Infections

➢ *Operational Definition*

- **Acute Respiratory Tract Infections**: It refers to any or combinations of signs and symptoms like cough and cold, running nose, sore throat, earache, fast breathing, chest in drawing, nasal flaring, cyanosis, grunting, wheezing, difficulty in feeding, abnormal sleep, stridor in calm child, fever or hypothermia, convulsions among under five children.
- **Mothers:** In this study, all mothers who are having under five children and who are attending ICDS centre.
- **Effectiveness:** It refers to the extent to which the planned teaching program has achieved its desired result, as evidenced by gain in knowledge among mothers of under five children attending ICDS centre, regarding prevention of ARIwhich is measured by structured interview schedule.
- **Planned Teaching Program:** In this study, it refers to a systematic planned teaching strategy, designed to provide information using AV aids to the mothers who are having under five children, about prevention of Acute Respiratory Infections on definition, factors influencing acute respiratory tract infections, clinical manifestations of ARI, preventive measures of ARI.
- **Knowledge:** It refers to the correct responses of the mother regarding prevention of ARI as measured by using a structured Interview schedule.

- **Selected variables:** In this study it refers to Age of mother, Education of mother, Occupation of mother, Family income, Number of children, Number. of under five children, Episodes of common cold/ year, Previous sources of information regarding prevention of ARI.

➢ *Assumption*

The study assumes that:

✓ Mothers are willing to participate in the study.
✓ Mothers give free and frank responses.
✓ Mothers are able to respond in Bengali.

➢ *Hypothesis*

✓ **H_1**: After administration of planned teaching program the mean post test knowledge score is significantly different than that of mean pre test knowledge score among mothers of under five children at 0.05level of significance.
✓ **H_2**: There is significant association between Pre-test knowledge score of mothers of under five children and selected variables at 0.05 level of significance.

➢ *Delimitation*

The study is delimited to-

✓ Mothers who attended the selected ICDS centre of 24 parganas (south), W.B.
✓ Mothers who have under five children.
✓ Mothers who can understand Bengali
✓ Mothers who are available during data collection

➢ *Theoritical Framework*

Conceptualization refers to the process of developing and refining abstract ideas. Conceptual framework deals with interrelated concepts that are assembled concepts put together in some rational scheme by virtue of relevance to a common theme.

The theoretical framework of this study draws inspiration from the most widely used framework of Ludwig Von bertalonffy general system theory (1968) using the criteria of input, process and output.

The theoretical model of the present study.

- *Input*

According to General System theory, input refers to the matter, human energy, resources, evaluation criteria or information received from environment.

In this study, it refers to mothers' characteristics such as education, socioeconomic status etc. by semi-structured interview schedule and knowledge about prevention of ARI by structured interview schedule.

- *Process*

Process refers to the system by which matter, energy and information is modified or transformed within the system.

In the present study process refers to implementation of the planned teaching programme in order to improve the mothers' knowledge.

- *Output*

It refers to the evaluation of knowledge of mothers exposed to teaching, to find out whether there is evidence of desired change in the cognitive area, in relation to the objective of teaching.

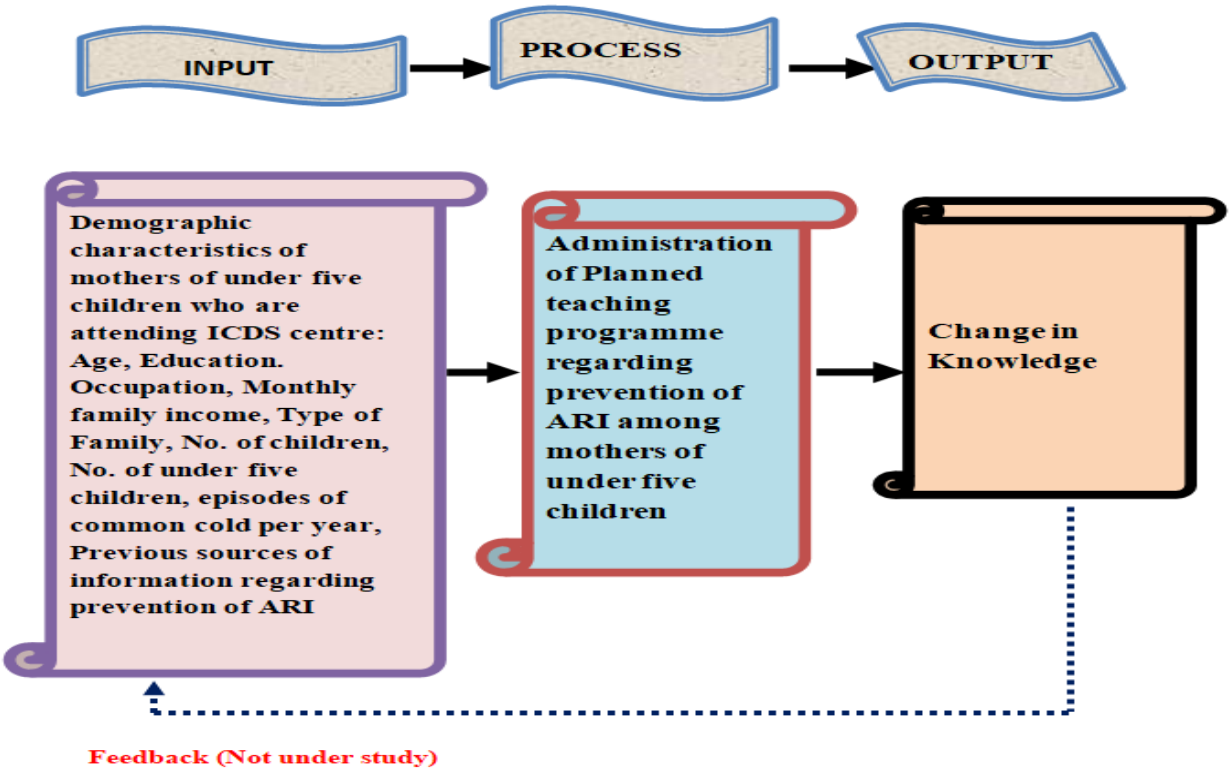

Fig 1 Conceptual Framework based on Ludwig Von bertalonffy general system theory (1968)

- *Organization Of Report*

The result of the study has been presented in the next four chapters-

- **Chapter-II :** Review of literature related to study.
- **Chapter – III :** Description of methodology and plan of data Analysis.
- **Chapter – IV**: Data Analysis and interpretation
- **Chapter – V**: Major findings, discussion in relation to other studies, conclusion, implication of the study andrecommendations based on the findings of the study.

The end of the chapter would also give selected list of the reference, bibliography and appendixes of the study.

ISSN No:-2456-2165

CHAPTER TWO
LITERATURE REVIEW

Review of literature is an essential step in the development of a research project. It involves a systematic identification of location, scrutiny and summary of written relevant materials. It enables the researcher to develop an insight into the study and plan for methodology.

In accordance with the statement the available literature is reviewed and organized under the following heading:

- *Literature related to Acute Respiratory Tract Infection*
- *Causes and risk factors of Acute Respiratory Tract Infection*
- *Signs and symptoms of ARI*
- *Attitude and practice about Acute Respiratory Tract Infection*
- *Prevention and management of Acute Respiratory Tract Infection*
- *Literature related to prevalence of Acute Respiratory Tract Infection*
- *Literature related to knowledge of mothers regarding prevention of Acute Respiratory Tract*
- *Literature related to the effectiveness of planned teaching program on prevention of ARI*

- *Literature Related to Acute Respiratory Tract Infection*

- *Causes and risk factors of Acute Respiratory Tract Infection*

K Hemagiri et al.conducted a hospital based case control study on the risk factors for severe pneumonia among 270under five children, whichwas carried out over a period of one year in Vijayanagara Institute of Medical Sciences Hospital, Bellary. Significant risk factors were use of biomass fuel (OR-2.49 95% CI 1.7-3.7), overcrowding (OR-2 95% CI 1.4-2.8), low birth weight (OR-1.5 95% CI 1.1-2.7), pre-lacteal feeding (OR-2.94 95% CI 1.9-4.5), lack of exclusive breast feeding for 4-6 months and malnutrition. On multivariate analysis younger age (p=0.019), incomplete immunization for age (p=0.00), low literacy level of mother (p=0.00) showed significant association with severe pneumonia. [20]

Mirji Gangadhar et al. conducted a hospital based case control study on Socio-demographic profile of under five children admitted for acute lower respiratory tract infections at Basaveshwar and Sangameshwar general hospital, Gulbarga. 200 ALRI cases and 200 healthy control children in the two months to five years age group were also interrogated. The study revealed that overcrowding was present in 106 (53.0%) cases and 44 (22.0%) controls. There was a significant association between overcrowding and ALRI with odds ratio of 4 (95% CI 2.53-6.33) for overcrowding, type of cooking fuel and ALRIwith odds ratio of 3.70 (95% CI 2.28-6.02) for biomass fuels, social class and ALR (77.5% cases belonged to lower class (Class IV +V), 22.0% cases belonged to middle class (Class II +III) and only one case belonged to upper class (Class I)..[21]

Jackson Stewart et al. conducted a systematic review and meta-analysis on risk factors for severe acute lower respiratory infections in children .The meta-analysis showed that 36 studies wereinvestigated.Among them 19 risk factors werepresent.Of these, seven risk factors were significantly associated with severe ALRI in a consistent manner across studies, with the following meta-analysis estimates of odds ratios (with 95% confidence intervals): low birth weight 3.18 (1.02-9.90), lack of exclusive breastfeeding 2.34 (1.42-3.88), crowding – more than seven persons per household 1.96 (1.53-2.52), exposure to indoor air pollution 1.57 (1.06-2.31), incomplete immunization 1.83 (1.32-2.52), under nutrition – weight-for-age less than 2 standard deviations 4.47 (2.10-9.49), and HIV infection 4.15 (2.57-9.74). [22]

Islam Farzana et al. conducted acommunity-based cross-sectional study in 21 registered urban slums of Guwahati in Assam, to determine the prevalence and risk factors associated with ARIamong 370 under-five children from 184 households and 370 families. The prevalence of ARI was found to be 26.22%; infants and female children were more affected. Majority of the ARI cases were from nuclear families (84.54%), living in kutcha houses (90.72%) with inadequate ventilation (84.54%), overcrowded living condition (81.44%), with kitchen attached to the living room (65.98%) and using biomass fuel for cooking (89.69%). ARI was significantly associated with ventilation, location of kitchen in household; presence of overcrowding, nutritional status, and primary immunization status also had impacts on ARI. [23]

Yadav S et al. conducted a study on the risk Factors for Acute Respiratory Infections in Hospitalized under five children in Central Nepal. The study revealed that poor socio-economic status, education status of the mothers, incomplete immunization, indoor smoking by any family member, malnutrition, under nutrient (three times more risk of ARI than those who were had normal weight for age (OR 3, p=0.005, CI 1.405-6.423) were significantly associated to ARI (p<0.001). The risk of developing ARI increased by seven times if any of the family members other than mothers and siblings had RTI within two weeks (OR 7.1, p<0.001, CI 2.437-20.838). Crowding was associated with 2.3 times chances of having ARI (OR 2.3, p=0.037, CI 1.051-4.946). Living in urban area was associated with 13 times more risk of having ARI (OR 12.8, p<0.001, CI 4.918-33.363). [24]

ISSN No:-2456-2165

Goel K et al. conducted a cross sectional study on prevalence of acute respiratory infections (ARI) among 450 under-five children of Meerut district, India. The study result revealed that prevalence of ARI was highest in children of illiterate (49.14%) and primaryeducated (34.43%) mothers, higher in children of mothers who were using smoky chullhas (56.83%) as compared to those using smokeless chullhas (30.34%). This difference was statistically significant (x^2=3.91, p<0.001). According to the exposure to types of fuel and types of ARI, ARI cases were seen more in the rural area (75.49%) as compared to the urban area (22.89%) where smoky fuel was used but difference was not statistically significant (p>0.05). Prevalence of ARI amongst children who had no malnutrition was lowest (16.0%), while it was more in Grade-I to IV malnutrition. This difference was statistically significant (x^2=37.83, p<0.001) [25].

Prajapati Bipin et al. conducted a cross sectional study of risk factors of acute respiratory tract infection (ARI) among under five age group in uban and rural communities of Ahmadabad district, Gujarat. The study showed that severity of ARI was very high in the low birth weight baby (36.1%) as compared to the normal birth weight baby (17.3%) and the difference was statistically significant (x2= 21.32, p <0.001) . Positive correlation was found between birth order and occurrence of ARI that is lowest inin first birth order (14.6%) andhighest in fifth birth order (78.5%) and the difference was statistically highly significant (x2 =36.15, p <0.001). The difference between initiatedcomplementary feeding at the age of four months (21.3%) and 6 months (13.7%) and delayed start complementary feeding (30.7%)was statistically highly significant (x2=14.78, p <0.001).There was direct correlation between immunization status of children and occurrence of ARI. It was least in children who were fully immunized (9.1%) as compared to unimmunized children (33.7%). This difference was statistically significant (x2= 33.87, p<0.001) [9]

Broor S. et al. conducted a hospital based case control study to determine risk factors associated with severe lower respiratory tract infection (LRTI) in under-five children, who were attending Pediatrics outpatient department for immunization. Details of potential risk factors in cases and controls were recorded in pre-designed proforma.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% CI: 1.23–2.17); upper respiratory infection in mother (OR: 6.53; 95% CI: 2.73–15.63); upper respiratory infection in siblings (OR: 24; 95% CI: 7.8–74.4); severe malnutrition (OR: 1.85; 95% CI: 1.14–3.0); cooking fuel other than liquid petroleum gas (OR: 2.5; 95% CI: 1.51–4.16); inappropriate immunization for age (OR: 2.85; 95% CI 1.59–5.0) and history of LRTI in the family (OR 5.15, 95% CI 3.0–8.8) were the significant contributors of ALRTI in children under five years. [26]

Chatterjee Sconducted *a* cross-sectional observational study of epidemiological factors related to Acute Respiratory Infection (ARI) among 268under five children attending the Immunization Clinic of Calcutta National Medical College and Hospital.There was a total of 60 children having less than three or equal to three family members. Among them, 54 (90%) children were attacked by ARI in last 6 months.99 children had four to five family members. Out of 99, 93 (94%) children attacked by ARI in last 6 months. 61 children having six to seven family members. Out of 61, 59 (96.7 %) children attacked by ARI in last six months and followed by 48 children having more than seven family members. Among them, 47 (98%) children attacked by ARI in the last six months due to indoor smoking and absence of a separate kitchen. A minimum 50% (3/6) of ARI attacked in the last six months by electric oven and also 98% of cases ARI in last six months were due to the absence of exclusive breast feeding [27]

Dr. K. YousifThamer et al. conducted a study on epidemiology of acute respiratory tract infections (ARI) among 5550children under five years old attending tikrit general teaching hospital and among them total ARI case was 2450 children. This study revealed that 420 (17.2%) of ARIs cases had history of LBW, 514 (61.8%) of cases were fully immunized according to the immunizationschedule. There was a highly significant association between the LBW history, undernourished children, type of feeding and ARI severity (p- value =0.0001). All cases from rural areas had pneumonia of different severity (very severe disease 83 (22.4%), severe pneumonia 64(17.1%), and pneumonia 225(60.5%) with strong statistical significant association between ARIs severity and rural residency (P-value = 0.0001). The study showed that, maternal smoking had no significant association with the occurrence of ARI but have high statistical significant association with the severity of ARI cases and parental smoking was just opposite to it. [28]

- *Literature Related to Signs and Symptoms of ARI*

Thompson Matthew et al conducted a study on duration of symptoms of respiratory tract infections in children, with acute respiratory tract infections in primary care or emergency settings in high income countries, who received either a control treatment or a placebo or over-the-counter treatment. There were systematic reviews of existing literature to determine durations of symptoms of earache, sore throat, cough (including acute cough, bronchiolitis, and croup) and common cold in children. Study populations varied in age and duration of symptoms before the onset of the study. In 90% of children, earache was resolved within seven to eight days, sore throat between two and seven days, croup by two days, bronchiolitis within 21 days, acute cough within 25 days, common cold by 15 days, and non-specific respiratory tract infections symptoms within 16 days. [29]

K Hemagiri et al. conducted a hospital based case control study on risk factors for severe pneumonia in under five children, which was carried out over a period of one year in Vijayanagara Institute of Medical Sciences Hospital, Bellary. 270 children suffering from severe or very severe pneumonia as ascertained by WHO criteria, of age below five years, of both genders, admitted in pediatrics wards taken as 'cases.Cough was the most common symptom present in 266 (98.5%) cases, followed by hurried breathing in 257 (95.2%) and fever in 248 (91.8%) cases. 123 (45.5%) cases had refused feeding and wheezing was present in 30 (11.1%) cases. Crepitations were present in all the 270 (100%) cases, chest retractions were seen in 235 (87%) cases and rhonchi in 114 (42.2%) cases. Convulsions were present in 12 (4.4%) cases, cyanosis in 14 (5.2%) cases and stridor in 10 (3.7%) cases. [20]

Gupta Neeru et al conducted a cross sectional survey on evaluation of diarroeal diseases and acute respiratory tract infections control program in urban slum of Delhi. 191 (14.6%) of 1306 children surveyed, had an attack of ARI in preceding 2 weeks. 78% cases were with mild running nose, 76.4% cases were with cough and 45.5% cases were with fever as common sign and symptoms. Only 4 % had fast breathing.[13]

Dr. K. YousifThamer et alconducted a study on epidemiology of acute respiratory tract infections (ARI) among children under five years old attending Tikrit General Teaching Hospital. The study showed that the dangerous signs in ARI children include fever (87%), the second being cough, also should be considered as dangerous signs (63%), while difficulty of breathing was found in (44.6%) of ARI patients, running nose, rapid breathing was found in 25.6% and 23% respectively. While wheezing, cyanosis drinking difficulty, sleep disturbance, chest in drawing, malnutrition was considered by a small percentage of mothers as a dangerous sign. Regarding the hospital admission the study illustrated that 196 (90.9%), 446 (92.9%), 652(55.2%), and 176 (30.8%) of patients who had very severe disease, severe pneumonia, pneumonia, and no pneumonia respectively were admitted to hospital during the study period, So the total patients admitted to hospital were 1470 (60%), and 980 (40%) were treated as an out patient. [28]

Kumar Rajesh, Hashmi Anjum, Soomro Ahmed Jamil, Ghouri Aslam conducted a study on knowledge attitude and practice aboutthe respiratory infection among the mothers of under five children attending civil Hospital Mithi Tharparkar Desert. In ARI cough was present in 76% cases, fever in 72% cases, breathing difficulty in 48% cases, running of nose in 47% cases and ear discharge present in 2% cases. [30]

According to NFHS -3 (2005-06) in Tamil Nadu, it was suggested that among 152 no. of under six months of children, 5.2% had symptoms of ARI and 8.2% had fever ; among 184 number of six to eleven monthsaged children , 4.9 % had symptoms of ARI and 14.1% had fever ; among 290 no. of twelve to twenty three months of aged children, 3% with symptoms of ARI and 6.8% had fever; among 364 no. of twenty -four to thirty five monthsof aged children, 4.4% with symptoms of ARI and 10.1% had fever; among 332 no. of thirty six to forty seven months aged children, 3.7 % had symptoms of ARI and 7 % had fever; among 340 number of forty-eight to fifty- nine months aged of children, 2.1% had symptoms of ARI and 9.9% had fever.[31].

- *Attitude and Practice About Acute Respiratory Tract Infection*

Dr. Jayantilal Prajapati Bipin, Dr. J TalsaniaNitiben, Dr. K Lala Mrudula, Dr. K N Sonalia, conducted a cross sectional study on Knowledge, Attitude and Practices of mothers regarding Acute Respiratory Infection (ARI) in urban and rural communities of Ahmedabad District, Gujarat. About 61.4% of mothers preferred the government set up as a place of choice for treatment but 35.2% of mothers preferred private treatment. In urban area, 58.4% mothers preferred private set up as a place of choice for treatment, as compared to the rural areas (12.4%) respectively. About three- fourths (71.4%) of mothers preferred allopathy as a choice type of treatment. 21.8% preferred household remedies as a choice of treatment. Allopathic treatment was slightly more in rural area (74.2%) as compared to the urban areas (68.4%) but Homeopathic treatment was more preferred by urban people (11.2%) as compared to rural areas (2.4%) respectively. [32]

Dr .K.YousifThamer, Dr. Khaleq Ban A conducted a study on epidemiology of acute respiratory tract infections (ARI) among 5550children under five years old attending Tikrit General Teaching Hospital.Out of 5550, total ARI caseswere2450 children andthe study period was Nov.2004 to April. 2005.This study showed that antibiotics were prescribed for 2005 (81.8%) cases as a part of hospital management, 100% of cases with very severe disease and severe pneumonia had received antibiotics, while 985 (83.4%) and 324 (56.4%) of cases with pneumonia and no pneumonia respectively, had received antibiotics. Other drugs prescribed were cough syrup for (61.2%) of patients and antipyretic for (55%) of patients of the total cases, 1254 (51.2%) cases received medications before presenting to the hospital, 960 (77.3%) of those children received these medications by prescriptions from private doctors, and 172 (13.7%) of cases, by physicians in health centers, and 112 (8.9%) of cases received these medications without any medical prescription. [28]

Kumar Rajesh et al. conducted a study on knowledge attitude and practice about respiratory infection among the mothers of under five children attending civil Hospital Mithi Tharparkar Desert. The study revealed that 76% mothers said that breastfeeding should be continued during illness and 24% mothers said that routine feeding should not be continued during ARI. 36% mothers

started home remedies while 64% mothers went to see the doctor and 95% mothers followed the Doctor's advice while 5% did not. [30]

Bandyopadhyay Dr Debasis,Ahemed Dr T conducted a cross sectional study on knowledge, attitude and practice with acute respiratory infection among 600 mothers in urban and rural communities of Burdwan district, West Bengal, India. The questionnaire regarding knowledge revealed that 40% of mothers preferred private set up as a place of choice for treatment (more in urban area 55%). 70% of mothers preferred allopathic medicine as a choice type of treatment. It also showed that education could change health care seeking behaviors and attitude of parents and other family members to take care of the ARI child during illness. [33]

Gupta Neeru et al conducted a cross sectional survey on evaluation of diarroeal diseases and acute respiratory tract infections control program in urban slum ofDelhi. 191 (14.6%) of 1306 children surveyed, had an attack of ARI in the preceding 2 weeks. One or more danger signs were known to 80% of mothers and 80% mothers had sought treatment. ARIs were mild or self limiting but 16% mothers perceived so and the doctor also prescribed medicines. Nearly 71.3% mothers had reported to be seeking medical advice. There the annual adjusted morbidity rate was 1.69 episodes per child per year.50% mothers had followed continued breastfeeding during ADD episode. 34% mothers were aware of atleast two danger signs. [13]

- *Prevention and management of Acute Respiratory Tract Infection*

Mishra S et al. conducted a study 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. [34]

Rehman GN et al. conducted a community - based studyson ARI concepts of mothers in the villages, Punjab a. Local concepts regarding these illnesses were studied by interviewing 315 mothers of young children in their homes in villages, Punjab. Mother described Pneumonia differently from cough and cold but only few reported fast breathing as a sign of pneumonia. Both illnesses 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 a child was not improved after two days of a given medicine they would change the medicine or the doctor. [35]

Teka T, Dagnew Mconducted a study on health behavior of132 rural mothers with acute respiratory infection in children in Gondar, Ethiopia. Researcher took one-month duration to assess the mothers, knowledge, attitudes and practices regarding acute respiratory infections in their children. Most mothers recognized that respiratory rate (77.3%) high fever (76.5%) and decreased feeding (62.8%) were important signs of pneumonia. They all knew that grunting was also an important new sign. Only 35.6% would take their child with these symptoms to a nearby health center. Other common treatment was taking the child to a traditional healer (64.4%) and applying butter and herb to the chest via a massage at home (95.5%). [36]

- *Literature Related to Prevalence of Acute Respiratory Tract Infection*

Sharma Dhananjaya et al. conducted a study on Prevalence of acute respiratory infections and their determinants in under five children in urban and rural areas of Kancheepuram district, South India. ARI was found in 135 children with a prevalence rate of 27% (95% CI 23.1-31.1). ARI was found to be more in one to four year age group (62, 45.6%), followed by infant age group (54, 40%). Male children were affected more than female children, but the difference was not statistically significant. Occurrence of ARI was higher in the lower social class 107 (79.3%), illiterate mothers (51, 37.8%). [18]

Elizabeth A.M, Raj Sherin conducted a study on impact of bio-social factors on morbidity among under-five children in Odisha. This study utilized the data collected under National Family Health Survey (NFHS-3) between late November 2005 and April 2006. Under this survey a sample of 3,910 households who were representative at the state level from rural and urban areas was collected. From the selected households, 4,540 women in the age group of 15-49 were interviewed and information on 1,715 under 5 children was collected. This collected information was made available in the NFHS-3 data file for Odisha state. 3 % of children below the age of six months suffered from ARI, while the prevalence rate increased at the age interval of 6-23 months and reached 5.5 % during 12-23 months of age. After that, it subsequently diminished and reached 1.4 % during 36-47 months. In 48-59 months, interval it showeda slight upward trend and it shot up to 1.7 %. [37]

M. Radhika conducted a nonexperimental- descriptive cross sectional study to assess the prevalence of respiratory tract infection among 100under five children in selected a village at Nellore District. The study showed that 63 %had respiratory tract infection and 37% were normal. Among 63children, 29% had mild, 22% had moderate and 12% had severe respiratory tract infection. There was a significant association between the prevalence of respiratory tract infection and demographic variables such

as age, developmental stage, and history of exposure to passive smoking, history of previous illness, immunization status, and body built. [38]

Goel K et al. conducted a cross sectional study on prevalence of acute respiratory infections (ARI) in Under-five children of Meerut district, India. Its sample size was 450. This study result revealed that 52% of children had Prevalence of ARI. A total frequency of prevalence of ARI was 234 out of 450. According to sex-wise 53.84% were males and 46.15% were females.46.15 % of ARI cases were in one to four years of age group and in this age group 45.24% were males and 47.22 % werefemales**. [25]**

LM Verhagenet al conducted a study on high prevalence of acute respiratory tract infections among Warao Amerindian children in Venezuela, in relation to low immunization coverage and chronic malnutrition. The study result showed that out of 487 children, 47% had an ARI. Out of total ARI, 60% had upper respiratory tract infections and 40% were ALRTI. Immunization coverage was low, with only 27% of all children presenting a vaccination card being fully immunized. The prevalence of malnutrition was high (52%), with stunting (height-for-age <-2 standard deviations) being the most frequent presentation affecting 45% of children. ARTI and ALRTI prevalence diminished with increasing age (odds ratio for ALRTI in children 25-59 months of age vs. children younger than 12 months, 0.49; 95% confidence interval, 0.26-0.93). Furthermore, significant differences in ARTI prevalence were seen between villages. No significant associations between immunization status or malnutrition and ARTI or ALRTI prevalence were identified. [39]

UjunwaFA and EzeonuCT conducted a cross sectional study onRisk Factors for Acute Respiratory Tract Infections in under-five children in Enugu Southeast Nigeria. In total 436 under-five children diagnosed with ARI was carried out in three hospitals in Enugu. The studt showed that out of 436 patients, 224 were males and 212 were female. The mean age of the population was 18.75(13.38) months and there were 31.6 % (138/436) cases of pneumonia 6.9% (30/436) cases of bronchiolitis and 61.5% (268/436) cases of acute upper respiratory tract infections. Children less than 20 months accounted for 60.9% (84/138 cases) of pneumonia, 86.7% (26/30 cases) of bronchiolitis, and 64.5% (173/268 cases) of acute upper respiratory tract infections.[40]

Gupta Neeru et al conducted a cross sectional survey on evaluation of diarroeal diseases and acute respiratory tract infections control program in urban slumof Delhi. 191 (14.6%) of 1306 children surveyed, had an attack of ARI in the preceding two weeks. There the annual adjusted morbidity rate was 1.69 episodes per child per year. [13]

Dr. K. Yousif Thamer, Dr. Khaleq Ban A. conducted a study on epidemiology of acute respiratory tract infections (ARI) among 5550children under five years old attending Tikrit General Teaching Hospital.Out of 5550, the total ARI cases were 2450. Among 2450; 216 (8.8%),480 (19.6%), 1181 (48.2%) and 573(23.4%) were classified as very severe disease, severe pneumonia, pneumonia, no pneumonia respectively. The study showed that 1539 (62.8%) of all ARIs cases occurred in the first year of life and 1279 (52.2%) of ARI cases were most frequently diagnosed at the age group of 3-13 months. High significant association was observed between the age and ARI severity.1612 (65.8%) were found to be males and 838 (34.2%) were female) and ARIs were 1.5 times higher among males than females but no significant association was observed between ARI severity and gender. [28]

Pai Mamatha Shivanada conducted a descriptive study of correlate of acute respiratory tract infection (ARI) among infants in a selected area of Udpai district.110 mothers and infants above three months were selected for study. The study showed that 60.9% children had ARI four to six times in the past three months. During one-month observation maximum number of children (48.6%) had at least suffered from ARI once. Chi square values computed between occurrence of ARI and selected variables revealed significant association between occurrences of ARI and physical health of the infant and environment pollution. The study showed that majority of children suffered 4-6 times with respiratory tract infection in three months of the study period. [41]

K.Hemagiri et al. conducted a hospital based case control study on risk factors for severe pneumonia in under five children which was carried out over a period of one year in Vijayanagara Institute of Medical Sciences Hospital, Bellary. 270 children suffering from severe or very severe pneumonia as ascertained by WHO criteria that is they were case. Out of 181 male cases, 145 (80.1%) were diagnosed with severe pneumonia and 36 (19.9%) with very severe pneumonia. Out of 89 female cases 66 (74.2%) had severe pneumonia and 23 (25.8%) had very severe pneumonia. [20]

Dr. Ashish Gupta, Senior Consultant, Pediatrics at Rockland Hospital laments, reported that pneumonia killed 13 lakh children of under five globally. Of the pneumonia deaths, 81% were less than two years old. The situation in India is no better. [42]

Rijal P et al. carried out a retrospective study on profile of acute lower respiratory tract infection in 73 children under fourteen at Nepal Medical College Teaching Hospital (NMCTH.The children were divided into four age groups< 2years, 2-5 years, 5-10 years and 10-14 years. The respiratory problems were classified according to plain chest x- rays as bronchiolitis. This study showed that 52.0% below two years of age had acute lower respiratory tract infections, where 68.4% had pneumonia and 31.6% had acute bronchiolitis. The prevalence of infections was 58.9% in male children. The occurrence of infections was common in the months of January and April. [43]

Anders et al conducted a study on population-based study of acute respiratory infections in children; Sisimiut, a community on the west coast of Greenland. This study result revealed that the prevalence of respiratory symptoms, fever, and diarrhoea was highest in the age group 6–11 months. Respiratorysymptoms and diarrhoea, but not fever, were reported more often for boys than for girls. Thecorresponding incidence of respiratory symptoms was almost three times higher than the incidence of fever and six times higher than that of diarrhoea. For all three illnesses, a steep rise in incidence was seen from the age <5 months to 6–11 months, followed by decreasing incidence up to two years of age. For respiratory symptoms, 5% of the children had no episodes, 37% had one to four episodes, 41% had five to nine episodes, and 16% had >10 episodes. The median numbers of episodes of feverwas two and median duration of upper respiratory infections episodes was 14 days and lowerrespiratory infections episodes was19 days. (44)

- *Literature related to knowledge of mothers regarding prevention of Acute Respiratory Tract*

Dr. BandyopadhyayDebasis, Dr. Ahemed T conducted a study of knowledge, attitude and practice among mothers towards acute respiratory infection in urban and rural communities of Burdwan district, West Bengal, India: This study result revealed that the level of knowledge was not satisfactory regarding seriousness of ARI. (57.5%) of mothers that is, more than half of mothers rated diseases as casual, while 42.5% of mothers rated diseases as serious. Rating of disease as casual was more in the urban areas (45%) as compared to the rural areas (70%). (33)

Dr. jayantilal Prajapati Bipin et al. conducted a cross sectional study on Knowledge, Attitude and Practices of 500 mothers regarding Acute Respiratory Infection (ARI) in urban and rural communities of Ahmadabad District, Gujarat in September2008 to March 2009. Among them, 250 for urban and 250 for rural areas of Ahmadabad were studied. The study result revealed that the level of knowledge regarding seriousness of ARI was not satisfactory. About more than half (59.2%) of mothers rated diseases as casual, while40.8% of mothers rated diseases as serious. Rating of diseases as casual was more in urban areas (54.4%) as compared to rural areas (27.2%). (32)

Fawzia E. et al. conducted a cross sectional descriptive study on Mothers' learning needs assessment regarding pneumonia among children less than five years at Saudi Arabia. The total sample size was 160 mothers. Out of 160 mothers, 75% (120/160) mothers had good knowledge regarding sign and symptoms, causes and factors, simple assessment for pneumonia, prevention of pneumonia. 17.5% (28/160) mothers had knowledge regarding it and followed by 7.5% (12/160) mothers who had poor knowledge regarding it. (45)

Kumar Rajesh et al. conducted a study on Knowledge, Attitude and Practice about Acute Respiratory Infection among the mothers of under five children attending Civil Hospital Mithi TharparkarDesert, Pakistan. This study revealed that 72 % of mothers had knowledge about ARI and 28% of mothers had no knowledge about ARI. 56% mothers took ARI as a serious disease while 44% did not. About causes of ARI, 72% mothers described the right reason of ARI while 28% mother gave irrelevant answers. (30)

Simiyu DE et al. conducted a study on 309mothers' knowledge, attitudes and practices regarding acute respiratory infectionsto control ARI in developing countries in children in Baringo District, Kenya. The study result showed that 34% had no formal health education, only 18% of mothers described pneumonia as satisfactory and 87.1% of the mothers said they would seekhealth centre services for severe ARI. Formal education had a positive influence on theKAP of the mothers. The study revealed that health education programs could only be effective when designed to take into account the prevailing KAP of the community towards ARI in their children. (46)

Flower Little conducted a descriptivestudy on assessment of knowledge and practice of 60 mothers of under five children regarding acute upper respiratory tract infection in selected rural area in south Bangalore.Main findings of the study were there was significant association between knowledge and practice with selected demographic variables like education, occupation, medium of cooking type. 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. (47)

Saini NK et al. conducted a study of knowledge and practiceon acute respiratory infection in children in two villages of block Beri of district Rohtak, Haryana.304 mothers were interviewed. About 23% of mothers recognized pneumonia by fast breathing and 11.2% recognized severe pneumonia by chest indrawing. 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. (48)

➢ *Literature Related to the Effectiveness of Planned Teaching Program on Prevention of ARI*

Jena Mamata conducted a study on Effectiveness of Information Booklet on Knowledge and Practice about prevention of pneumonia among 50 mothers of under five children at Bhubaneswar, Odisha. The result of the study revealed that the mean post-test knowledge score (19.94) of the mothers of under five children, on prevention of pneumonia, was higher than their mean pretest knowledge score (11.54),with a mean difference of 8.4. The standard deviation of post-test (2.11) was less than pre-test (2.19) which indicated that there was marked gain in knowledge in the post-test than pre-test.re 14.68 with a mean difference of 8.68 was much greater than the tabulated 't' value of 2.01at 0.05 level of significance,indicating the effectiveness of information booklet in increasing knowledgeand knowledge on practice. (49)

Prasanna K. et al. conducted a study on effectiveness of Structured Teaching Programme vs. self instructional module regarding Prevention of Acute Respiratory Infections in children among 60 mothers (STP group consisted of 30 mothers and SIM group consisted of 30 mothers) atMahalakshmipuram, an urban area in Bangalore. The study revealed that for STP group, mean post test knowledge score (22.33) was higher than the mean pretest knowledge score (15.53). The mean difference between pretest and post test score (6.8) of knowledge at 0.05 level as the t=16.08 (*P < 0.01). For SIM group, mean post test knowledge score (19.17) was higher than the mean pretest knowledge score (16.37). The mean difference between pretest and post test score (2.8) of knowledge at 0.05 level as the t=9.424 (*P < 0.01). From the above findings STP & SIM group it was found that mothers had gained significantly in overall knowledge related to ARI. The differences were significant p< 0.05 from the values obtained from paired t-test at df: 29. It was also evident that mean difference gain in knowledge of STP group was slightly more than gain in knowledge of SIM group (50).

D 'Souza Asha et al conducted a study on knowledge of mothers regarding prevention and management of respiratory tract infection in children in rural community area, Mangalore. This evaluative study shows that the overall pre test mean knowledge score found to be 14.14 with SD 2.748 as compared to over allpost test mean knowledge score noticed as 20.9400 with SD 2.76575. Further, enhancement mean knowledge score found to be 6.8 with SD 0. 018.The data subjected for statistical paired t test showed a highly significant difference (p<0.05) existing between pretest and post-test overall mean knowledge score. (19)

Mali Sachin conducted a quasi-experimental study to evaluate the effectiveness of structured teaching programme on domiciliary management and prevention of upper respiratory tract infections, among 60mothers (experimental Group- 30 and Control Group-30) of under five children at urban slums, Bangalore. The difference in pre test and post test mean knowledge score in control group was 0.9%, withpaired't' test value of 1.83,which is found to be statistically non significant at 5% level. The findings of the study revealed that the over allpost tests mean knowledge score (79.7%)ondomiciliary management and prevention of upper respiratory tract infections in experimental group was higher than that of meanpre test(48.8%) knowledge score with a mean difference 30.9% and the paired't' test value was 40.30* at 5% level of significance.Overall,the post test mean knowledge scores of control and experimental was 49.1% and 79.7%. The obtained "t' value 16.78* was statistically significant at p < 0.05 level. Hence, there is significant difference in the post test knowledge score of mothers among Control Group and Experimental group. So, the Structured Teaching Programmeregarding domiciliary management and prevention of upper respiratory tract infection was effective in the improvement of knowledge of mothers of under five children. (51).

Ericsson R conducted a quasi-experimental study to assess the effectiveness of structured teaching program on prevention and management of pneumonia in children among 60 mothers in child care area of a selected hospital, Ludhiana, Punjab. The tool used was structured questionnaire and degree of scoring was described as >76% had excellent knowledge, 66-75% had good knowledge, 56-65% had average knowledge and <55% had below average knowledge. The findings revealed that structured teaching programme was effective in improving the knowledge of mothers [p< 0.05]. (52)

Edwin G.S conducted aquasi experimental cohort group of pre testpost-test studyon planned teaching program on knowledge, attitude and knowledge on practiceof acute respiratory infections among 60 mothers (Experimental group -30 and Control group-30) of under five children in Trichy in OPD of Children Speciality Hospital. The Study result revealed that the meanpost test knowledge score (17.15) was lower than the mean pre-test knowledge score (17.16) in control group with mean difference 0.1 and paired' test value was 3, which was found statistically non-significant at 5% level. The mean post-test knowledge score (65.56) was significantly higher than the mean pre-test knowledge score (18.2) in experimental group with mean difference 47.36. The calculated 't' value of knowledge score in experimental group was 38.345***. The S.D (6.76) of knowledge score in experimental group was more than the S.D (0.7) of knowledge score in control group. So, it indicated that control group was more homogenous than experimental group. (17)

ISSN No:-2456-2165

CHAPTER THREE
RESEARCH METHODOLOGY

This chapter includes the strategies to be used to collect and analyze the data to accomplish the research objectives and to test the research hypothesis. It deals with the brief description of methodology adopted for the present study which includes the research approach, research design, variables, research setting, population, sample and sampling technique as well as data collection tools and procedure, development and description of tools, pilot study and plan for analysis for the present study.

Research methodology is a way to solve the research problem systematically. The purpose of this section is to communicate to the readers what the investigator did to solve the research problem or to answer research questions.

➢ *Research Approach*

In this study, pre-experimental approach was selected to accomplish the objectives of the study.

➢ *Research Design*

It refers to overall plan for obtaining the data to fulfill the objectives of the study and for testing the hypotheses.

In this study, one group pre - test and post- test research design was used.

- *Symbolic Presentation of the Research Design is Presented as Follows:*

Fig 2 Symbolic Representation of Study Design

✓ **K_1**: Pre-test on knowledge of prevention of Acute Respiratory Tract Infections
✓ x: Planned Teaching Program onprevention of Acute Respiratory Tract Infections.
✓ **K_2** : Post -test on knowledge of prevention of Acute Respiratory Tract Infections

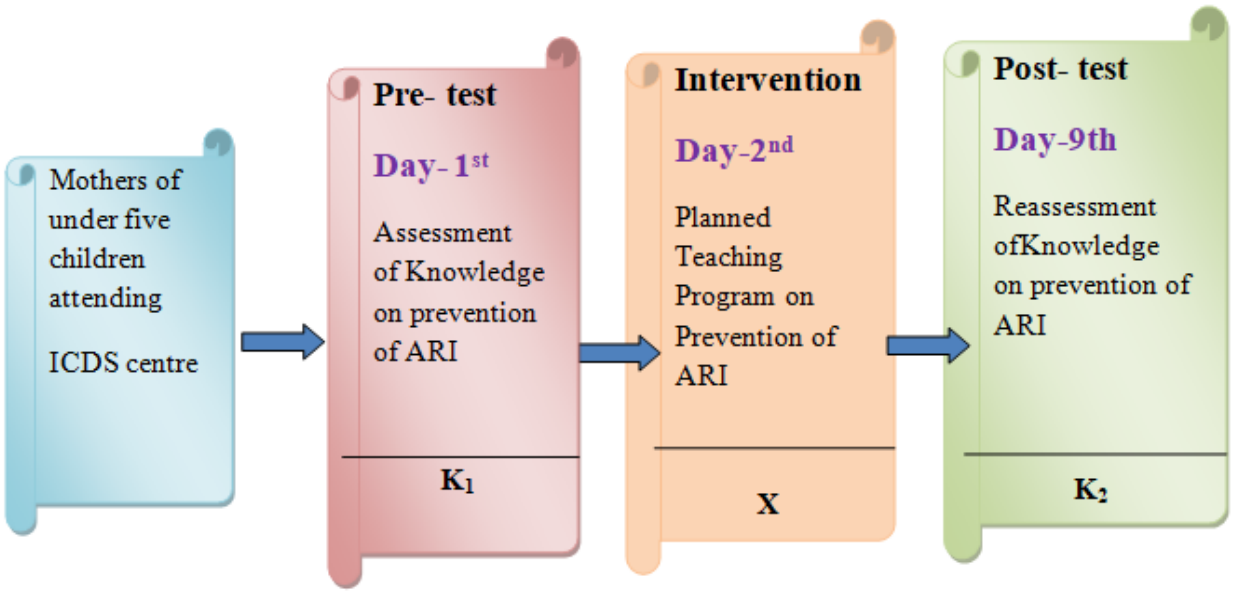

Fig 3 Schematic Diagram of Research Design

➢ *Variables Under the Study*

In the present study the variables under the study were

- *Independent Variable*

Planned Teaching Program on prevention of Acute Respiratory Tract Infections.

- *Dependent Variables*
  Knowledge on prevention of Acute Respiratory Tract Infections

➢ *Research Setting*

Setting was the place where the data collection took place. The selection of the setting is important because the setting can influence the way people behave or feel and how they respond.

The present study was conducted at two ICDS centres under Sonarpur Block, West Bengal, namely Sheetalabari ICDS centre, Vivekananda nagar, ward no-9 and Progressive club ICDS centre, Rupnagar, Ward no-11.

- *The reasons for selecting their setting for the study were:*

✓ Familiarity with the setting
✓ Easy accessibility of the area
✓ Feasibility of conducting the study
✓ Availability of adequate sample for the study.
✓ Administrative approval and expectation of co-operation from various personnel.

➢ *Population*

In the present study the population was mothers having under five children attending ICDS centres under Sonarpur Block, West Bengal.

➢ *Sample and Sampling Technique*

Mothers having under five children attending ICDS centre at Vivekananda nagar and Rupnagar under Sonarpur block, West Bengal.

- *Sample size*

✓ Sample size was considered as one of the major aspects in the conduct and evaluation of research.
✓ In this study, sample size was 100 mothers having under five children attendingselected two ICDs centres.

- *Sampling criteria*
  The criteria for selection of the participants were on mothers of under five children who:

✓ Werewilling to participate in the study
✓ Were present during data collection period.
✓ Were able to understand Bengali.
✓ Did nothave any hearing & visual problem.

- *Sampling technique*
  Mothers were selected by non-probability convenient sampling technique.

➢ *Data Collection Tool and Technique*

Based on the objectives and hypotheses of the study, the following data collection, tools were developed to collect necessary information as presented in table- 1.

Table 1 Tools and Techniques for Data Collection

Tool	Technique	Variable
Tool-I Interview Schedule **Section- A (**Semi-structured Interview Schedule)	Interviewing	Demographic variable
Section-B (Structured Interview Schedule)	Interviewing	Knowledge

➢ *Development and Description of the Tool*

The interview schedule was developed by an extensive review of research and non-research literature in the area of ARI among under five children. Informal discussion with peer group, community people, teachers and investigator's own experience also helped in the development of interview schedule.

- *For the Development of Tool Following Steps were Carried Out:*

✓ *Planning for interview schedule*
✓ *Development of first draft*

- ✓ *Establishment of content validity*
- ✓ *Development of second draft*
- ✓ *Try out*
- ✓ *Item analysis*
- ✓ *Establishment of reliability*
- ✓ *Development of final draft.*

✓ *Planning for interview schedule*

In planning the interview schedule, the objectives and specific contents were outlined. A blue print was prepared, specifying the content areas, domain of objectives, the total no. of items and the maximum possible scores of each category of response. Based onthe blueprint, an interview schedule on knowledge was developed to measure the mothers' knowledge on Prevention of ARI.

✓ *Development of first draft*

- Based on the blue print, interview schedule on knowledge was developed with items framed to measure the mother's knowledge regarding prevention of ARI.
- The tool was having two sections.
- **Section-A**: Semi-structured interview schedule on demographic variables of mothers. The total no. of item was 13.
- **Section-B:** Structured interview schedule on assessment of knowledge regarding prevention of ARI. The total no. of item was 22.

✓ *Establishment of content validity*

The contents of the constructed tools were validated by submitting to nine experts, along with the criteria checklist. Among them, four experts in community health nursing, two experts from community medicine and three experts from child health nursing. There were Q. 1-4, 6,7,9,12,13,13.1 which were unchanged and 100 % validity; Q. 8,10,11 were 100 % modification; Q.5 was deleted in tool1, Section A and in tool 1, section B; Q. 1,2,5,8-10,17,18,21,22 were not changed and 100% validity; 3,4,11,15,16,19,20 were modified and 90% validity and Q. 6,7,12,13,14 were deleted.

✓ *Development of 2nd Draft*

- After obtaining the suggestions of experts, in tool1, Section A Q. 1-4, 6,7,9,12,13,13.1 remained unchanged and; Q. 8,10,11 were modified and again Q.5 was added with some modification;In section B, Q. 1,2,5-8-12,13-15,18were notchanged; 3,4,16,17,19 were modified and Q. 6,7,12,13,14 were deleted and five new questions were added.
- 2nd draft was prepared after necessary correction, deletion, addition and changes in question wording and sequence.
- The Bengali version of the tool was prepared and language validity was established by retranslating it to English with the help of language experts.

✓ *Tryout*

Try out of the tool was conducted at NischindpurAghrani Sangha ICDS centre on 12.09.14 on 5 mothers after taking necessary permission from concerned authority.

Try out was conducted to check the clarity of items, ambiguity of statement of the tool. Each participant took 15-20 minutes to respond and it was understandable to them.

✓ *Item Analysis*

Item analysis was conducted at JagannathpurBalaksangho ICDS centre, Shimultala on 13.09.14 on 30 mothers. After item analysis 13 questions were taken to be good items and the rest of the questions were modified.

✓ *Establishment of reliability*

Reliability was conducted at NischindpurAghrani Sangha ICDS centre. The 2nd draft of the tool was administered to 10 mothers of under five children on 13.09.14 and pretesting of the tool was done and reliability was done by inter-rater method, with the help of Mrs. Anima Baidya, ICDS worker.

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Table 2 Reliability of Interview Schedule

Tool	Reliability Calculation	Type of reliability	Result
Tool-I- Interview Schedule **Section-A:** Semi-structured interview schedule on demographic variables of mothers.	Percentage of agreement	Equivalence	Range is from 0.8-1
Section B: Structured interview schedule on assessment of knowledge regarding prevention of ARI.	Spearman's rank order method	Internal Consistency	Score is 0.76

✓ *Development of Final Draft of Structured Interview Schedule*

The final draft of structured interview schedule was prepared after incorporating the suggestions of experts.In tool I, Section A; Total questions were nine that is Q. 1,2,4-7,13 wereunchanged, Q.3,8,9,10,11,12 were deleted and two questionswere added& in section B, total questions were 26, that is Q.7, 11,12,14,15,16,17,18,21 were unchanged & Q. 1,2,4,5,6,8,9,19,20,22 were modified; Q.3,10,13 were deleted and eight questionswere added.

- *Development of Content for Teaching Programme*
- *Preparation of Blue Print of First Draft of Content for Teaching Programme on Prevention of Acute Respiratory Tract Infections*

The blue print of the teaching programme content was written according to available literatures.

- *Development of Criteria Checklist*

✓ The draft of criteria checklist was developed under the following headings:

✓ Objectives of the content, relevancy, adequacy, organization of the Planned Teaching program, language and practicability with three options that were agree, partially agree, disagree.

- *Content Validity*

The criteria checklist was given to nine experts. The experts were requested to validate on criteria checklist to give further suggestions. There was 77.77% agreement and 22.22% modification. Experts gave their valuable suggestions on adding some new items also. The investigator prepared the 2nd draft of content for the teaching programme on prevention of Acute Respiratory Tract Infections.

- *Try Out of Content*

It was administered to five mothers of under five children, who attended Nischindpur ICDS centre on12.09.14. The average time taken for teaching was 30 minutes and some difficulty in language was identified.

- *Preparation of Final Content for Teaching*

Finally, the modified teaching plan was reviewed by guide to make it more accurate.

➢ *Pilot Study*

The researcher conducted the pilot study among fifteen mothers of under five children who were attending Tarun sangha club ICDS, Uttar Kumrokhali, Kamalgazi, Ward no. -27 under Sonarpur blockfrom 26.09.14 to 04.10.14. The participants were collected by non-probability convenient sampling technique from Tarun sangha club ICDS centre. The researchers met the participants individually and explained the purpose of the study. Confidentiality of the responses was assured and informed consent was obtained.

➢ *Steps of Data Collection*

The Researcher collected the data as follows:

- Ethical permission for conducting the research study was taken from ethical committee of Asia Heart Foundation. RTIICS, Mukundapur, Kolkata.
- Formal administrative permission was taken from District Programme Officer, Integrated Child Development Services, South 24 Parganas District, New Treasury Building, 7th floor, Alipore, Kolkata-700027
- Permission was sought from The Child Development Project Officer, Sonarpur Block, South 24 parganas, West Bengal.
- Researcher contacted the ICDS supervisor of Sonarpur Block. Two ICDs centres were selected. One was Sheetalabari ICDS centre, Vivekananda Nagar, ward no-9 and another one was Progressive club ICDS centre, Rupnagar, ward no-11 for study purpose.
- Then the researcher communicated with ICDS workers of selected centres. Self introduction was given and purpose of data collection was explained to the workers and participants.

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- Investigator took pre-test on 55 mothers on knowledge regarding prevention of ARI on first day (28.10.14) and the second day (29.10.14) atSheetalabari ICDS centre, VivekanandaNagar, ward no-9 under Sonarpur block. Approx.15-20 minutes time was taken for pre-test.
- Planned Teaching Program on knowledge regarding prevention of ARI was conducted at this ICDS centre on 2nd day (29.10.14). Duration of Planned Teaching Program was approximately 40-45 minutes.
- After seven days of Planned Teaching Program on knowledge regarding prevention of ARI, post-test was taken on 55 mothers on 5.11.2014. Approx. 10-12 minutes time was taken for post-test.
- In the second ICDS centre, investigator took pre-test regarding prevention of ARI on 49 mothers on first day (8.11.14) and Second day (10.11.14) at Progressive club ICDS centre, Rupnagar, ward no-11 under Sonarpur block. Approx.15-20 minutes time was taken for pre-test, followed by PTP on prevention of ARI. Duration of Planned Teaching Program was approximately 40-45 minutes.
- After seven days of Planned Teaching Program on knowledge regarding prevention of ARI, post-test was taken on 45 mothers on 17.11.2014. Approx. 10-12 minutes time was taken for post-test.

➢ *Ethical consideration*

- Permission, taken from ethical Committee
- Informed consent was taken from the entire mother.
- Privacy was maintained during interview
- Information was given to mothers (participant)

✓ About the purpose of study.
✓ Duration of time and duration of days of involvement.
✓ Types of involvement.
✓ Voluntary willingness for participation
✓ Harm or benefit of the study

- Risk benefit: There may be direct benefit from the study.
- Confidentiality: The information given by subject will be kept confidential and used only for the purpose of the study and anonymity will be maintained.

➢ *Plan for Data Analysis*

The data was planned to be analyzedby using both descriptive and inferential statistics, based on the objectives of the study. The following plan of data analysis was developed with the opinion of experts.

- *Descriptive Statistics*

✓ Frequency and percentage distribution to describe background information of mothers who attended ICDS centre.
✓ Frequency and percentage distribution of pre test knowledge score on prevention of ARI among under five children.
✓ Mean median and standard deviation of pre-test and post-test knowledge score.
✓ Frequency and percentage distribution post test knowledge score on prevention of ARI among under five children.

- *Inferential Statistics*

✓ Paired ‘t’ test used to find out the difference between pre test and post test knowledge score on prevention of ARI among under five children.
✓ Chi-square test to find out the association between pre-test knowledge score and selected factors.

➢ *Summary*

This chapter deals with the methodology adopted for the present study including research approach, design, variables under study, setting, population, sample and sampling technique, plan for pilot study and data collection technique.

ISSN No:-2456-2165

CHAPTER FOUR
ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with analysis and interpretation of the data collected from 100 mothers of under five children through semi structured interview schedule for demographic variables and structured interview schedule, to find out the knowledge of the mothers regarding prevention of ARI among under five children.

In order to interpret the data in a logical order both descriptive and inferential statistics were used.

- *Organization and presentation of data*

Table- 3 Organization and Presentation of the Study Findings

Objectives of the study	Section	Description	Statistical method used
To identify demographic characteristics of mother	**I**	Findings related to demographic characteristics.	Frequency and percentage distribution.
To assess the knowledge of mothers regarding prevention of Acute Respiratory Tract Infections before and after administration of planned teaching program	**II**	**1.** Findings related to knowledge level regarding prevention of Acute Respiratory Tract Infections before and after administration of planned teaching program	Percentage of mean knowledge gain in pre test and post-test on prevention of ARI among under five children. Area wise mean%
To find the effectiveness of planned teaching program on prevention of Acute Respiratory Tract Infections in terms of gain in post test knowledge score.	**III**	Findings related to difference between mean pre-test and post-test knowledge score.	Mean, median and standard deviation of pre-test and post-test knowledge score Paired‘t’ test used for find the difference between pre test and post- test knowledge score.
To find the association between the pre test knowledge level and selected variables.	**IV**	Findings related to association between pretest knowledge score and selected variables.	Chi-square test to find out the association between pre-test knowledge score.

- *Section I- Description of Demographic Characteristics:*

This section describes the personal characteristics of 100 participants in terms of their age, educational status, socioeconomic condition, type of family, no. of children, no. of under five children, previous knowledge regarding prevention of ARI in percentage distribution.

Table- 4 Distribution of Participants According to Age, Educational Status, Occupation and Monthly Family Income N=100

Demographic characteristics	Participants characteristics	Frequency
Age (in years)	up to 20	10
	21- 25	**46**
	26- 30	34
	31- 35	7
	>35	3
Educational status	**1.1** Illiterate	4
	Can read and write (without formal education)	5
	primary education (class I- IV)	9
	Middle class (class V- VIII)	**33**
	Secondary education (class IX- X)	29
	Higher secondary (class XI-XII)	11
	Above Higher Secondary	9
Occupation	Self- employed	10
	Home maker	**90**
Monthly family income (in Rs.)	<3000/	20
	3001/- 6000/	**48**
	6001/-9000/	21
	>9000/	11

- Data presented in Table :4 shows that out of 100 mothers, 46 % of mothers were within 21-25 years age groupand 3% were in>35 years age group. 33% of mothers had middle class (V-VII) education followed by 4% of mothers beingilliterate. This

ISSN No:-2456-2165

Table also shows that 10 % mothers were self employed and 90% mothers were homemakers. 48% mothers reported that their monthly family income was within Rs. 3001/-6000/- and 11% mothers reported that their monthly family income was Rs.> 9000/.

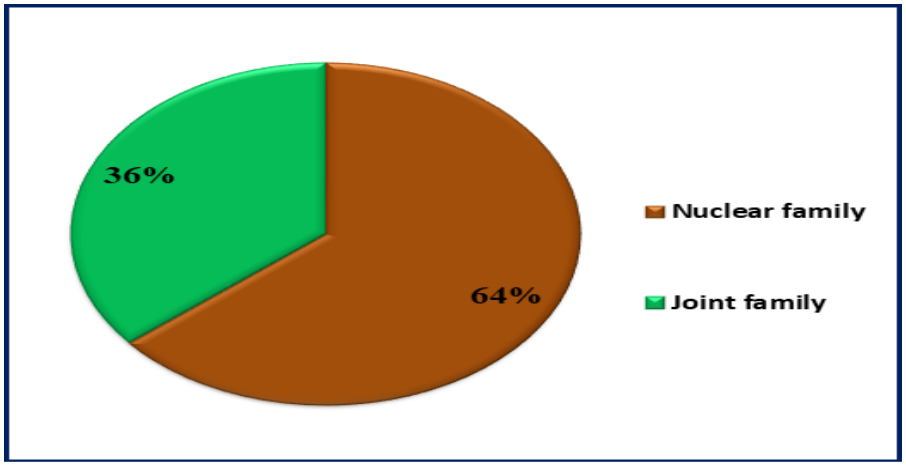

Fig 4 Pie Graph Showing Distribution of Mothers According to Types of Family N=100

- Data presented in Figure: 4shows that 64% of mothers belong to nuclear family and 36% of mothers belong to joint family.

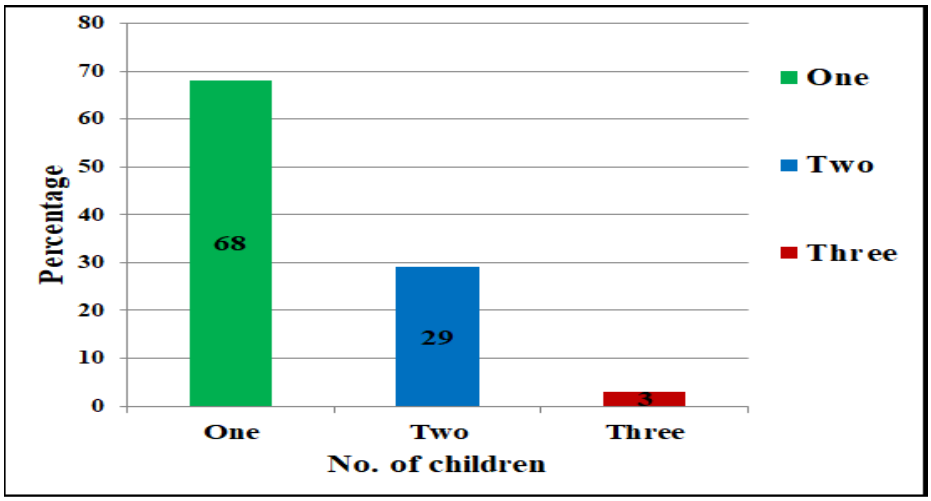

Fig 5 Bar Graph Showing Distribution of Mothers According to Number of Children N=100

- Data presented in Figure:5 reveals that maximum 68% of mothers have one child and minimum 3% of mothers have three children.

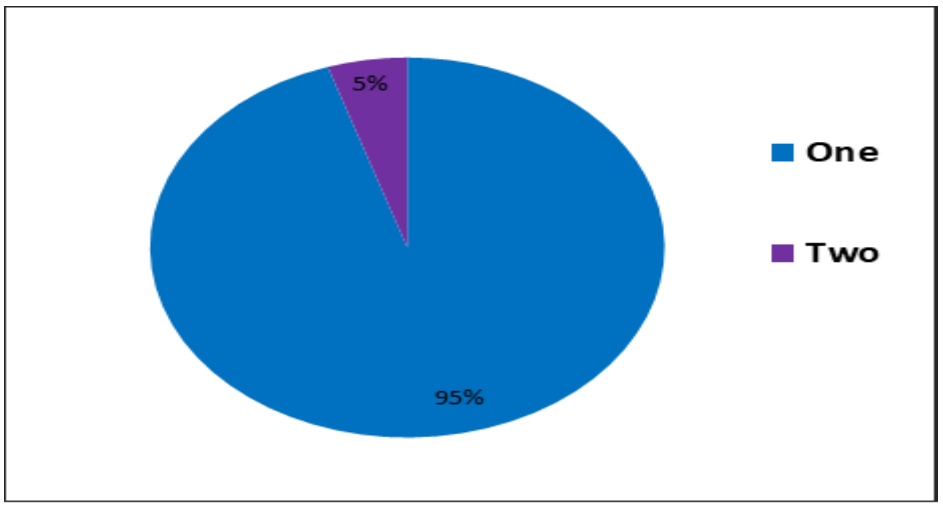

Fig 6 Pie Graph Showing Distribution of Mothers According to Number of Under Five Children N=100

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- Data presented in Figure: 6depicts that maximum 95% of mothers have one under five child and minimum 5 % of mothers have two under five children.

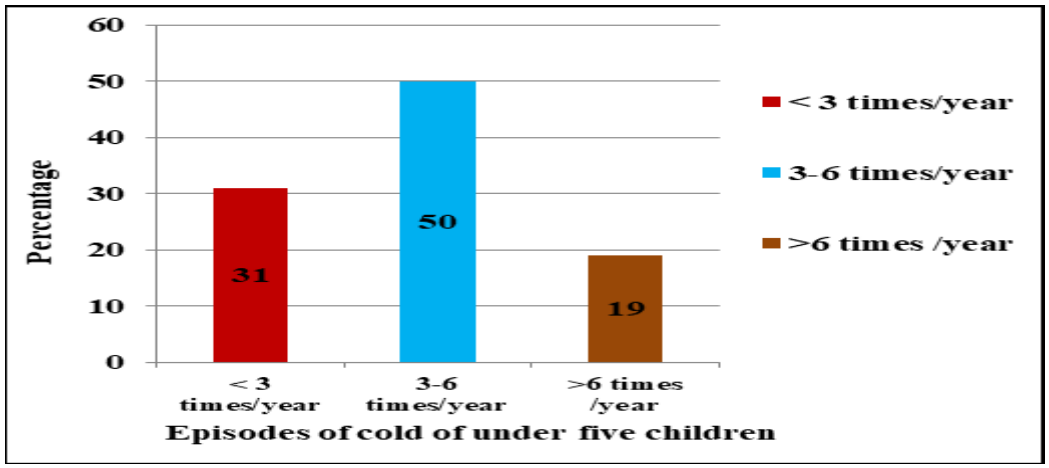

Fig 7 Bar Graph Showing Distributions of Episodes of Cold Per Year Among Under Five Children N=100

- Data presented in Figure: 7shows that maximum 50% of mothers reported 3-6 episodes of cold /year and 19 % of mothers reported more than 6 episodes of cold /year among their under five children.

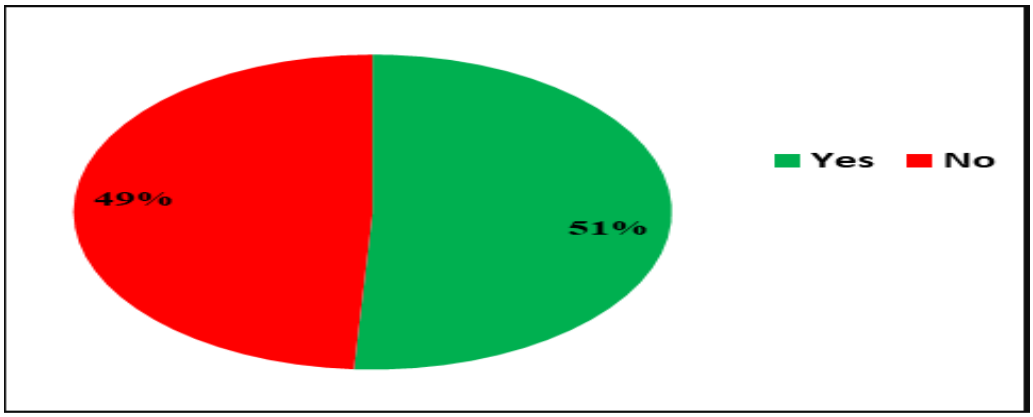

Fig 8 Pie Graph Showing Distribution of Mothers According to Received Information Regarding Prevention of ARI N=100

- Data presented in figure: 8 shows that 51% of mothers had received information regarding prevention of ARI and 49% of mothers had not received information regarding prevention of ARI.

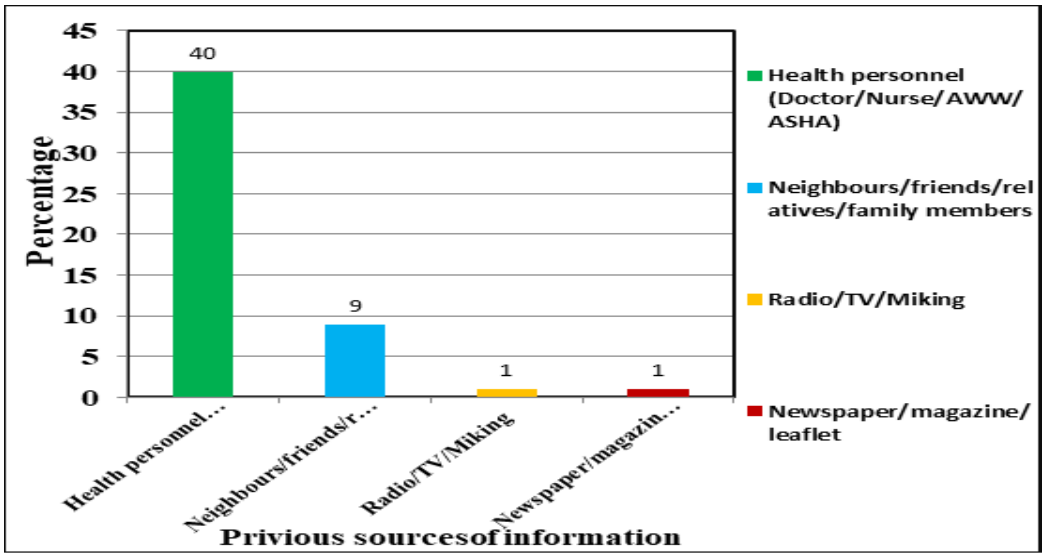

Fig 9 Bar Graph Showing Distribution of Mothers According to Previous Sources of Information Regarding Prevention of ARI N=51

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- In this figure:9 shows that 40% mothers had received information regarding prevention of ARI from health personnel followed by 1% of mothers from each Radio / TV / Miking and newspaper /magazine / leaflet.

➢ *Section: II- Findings Related to Knowledge Level Regarding Prevention of Acute Respiratory Tract Infections before and After Administration of Planned Teaching Program.*

Table 5 Area Wise Knowledge Gain in Pretest and Posttest N=100

Sl No	Area	Mean% score		Mean% gain		Modified gain
	Blue print	Pre-test	Post-test	Actual	Possible	
1.	Definition	63.33%	90.67%	**27.34%**	36.67%	0.74
2.	Factors influencing acute respiratory tract infections:	52.33%	86.67%	34.34%	47.67%	0.72
3.	Clinical manifestations of ARI	50.83%	89.5%	**38.67%**	49.17%	0.78
4.	Preventive measures of ARI	65.07%	93.42%	28.35%	34.93%	0.81

- Actual gain= post test mean % - pretest mean %
- Possible gain= 100- pretest mean %
- Modified gain = Actual gain/ possible gain
- Data presented in table 5 shows that maximum knowledge gain (38.6%) happens in the area of clinical manifestations of acute respiratory tract infections and minimum knowledge gain (27.34%) happens in area of definition part as per modified gain in percentage, as well as actual mean percentage gain.

➢ *Section III-* Findings related to difference between mean pre-test and post-test knowledge sore.

- H_1- After exposure to planned teaching programme there is significant difference in the mean post test knowledge score of the mother with that of mean pre-test knowledge score at 0.05 level of significance.
- To test the research hypothesis, null hypothesis was formulated.
- H_{01}- After exposure to planned teaching programmethere is no difference in the mean post test knowledge score of the mother than that of mean pre-test knowledge score at 0.05 level of significance.

Table 6 Mean, Median, Mean Difference, Standard Deviation and T Value of Pretest and Post Test Knowledge Scores. N=100

	Mean	Mean Difference	Median	SD	t' Value
Pre-test	15.57	8.18	16	3.59	19.48***
Post-test	23.75		25	2.26	

- $t_{(120)} = 3.37 < t_{(99)} < 't'_{(60)} = 3.46$, ($p < 0.001$)

The data presented in table 6, shows that the obtained mean difference is a true the mean post test knowledge score (23.75) is significantly higher than the mean pre-test knowledge score (15.57). The data also points out the S.D. of pre- test knowledge score (3.59) and S.D. post test knowledge score (2.26). It indicates that post test knowledge scores are more homogenous in the subjects.

It is also revealed from the data that mean post test knowledge sore is higher than the mean pre test knowledge score with a mean difference 8.18 which is found to be statistically significant, as evident from 't' value(19.48)which was much greater than **$t_{(99)}$ ($t_{(120)}$ value $= 3.37 < t_{(99)} < 't'_{(60)} = 3.46$)**at 0.001 level of significance. Hence null hypothesis is rejected and the research hypothesis is accepted.

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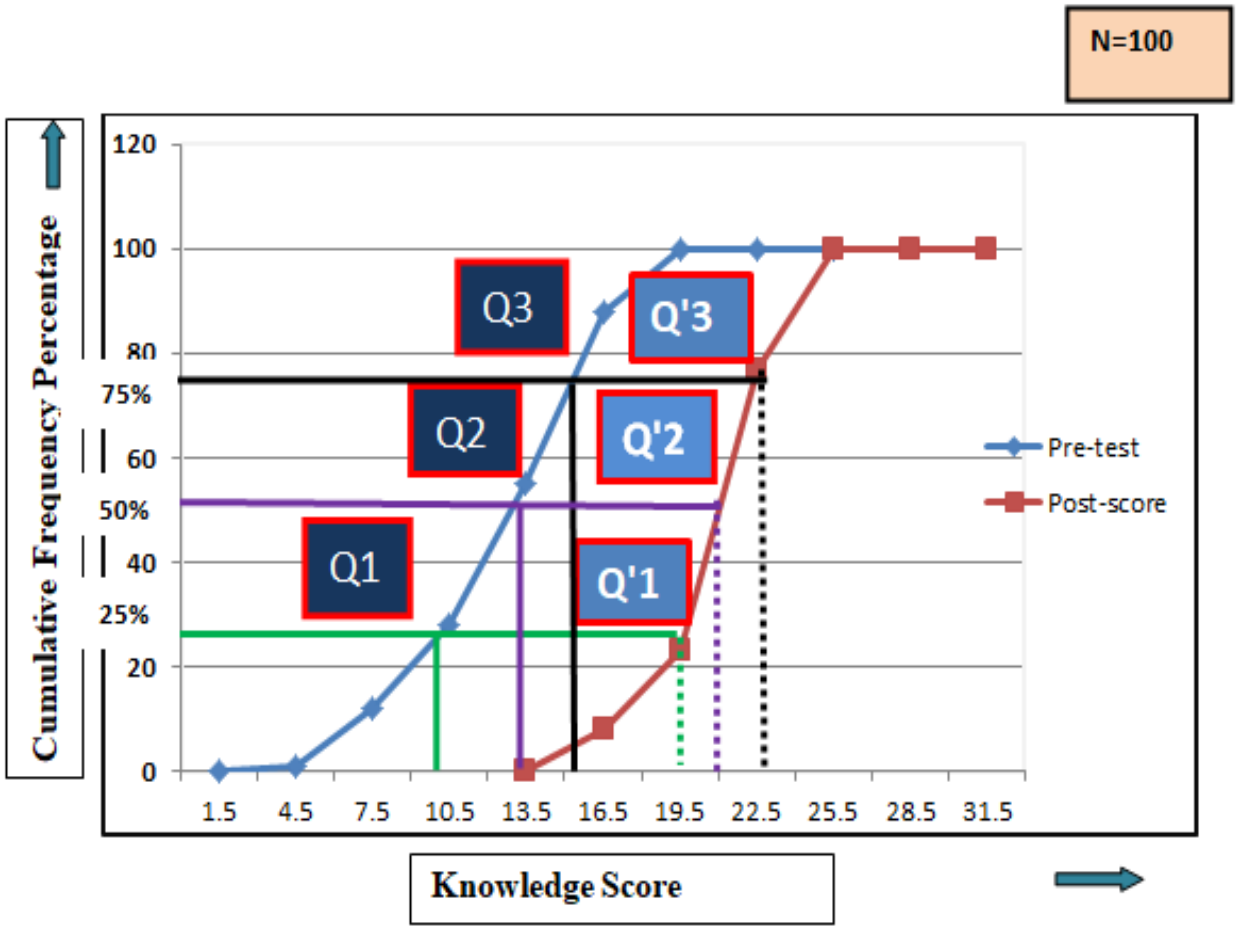

Fig 10 Cumulative Frequency Percentage Curve or Ogive of Pretest and Post Test Knowledge Scores

Cumulative frequency percentage curve of pretest and post test knowledge scores are plotted in figure 10 in same coordinate axis. They show that the post-test ogive lay on right side of the pretest ogive over the entire range. It indicates that the post test scores were consistently higher than the pretest score. The distance levels revealed the gain in knowledge after exposure to Planned Teaching Programme on knowledge regarding prevention of ARI, comparing certain percentile points which also show the gain in knowledge scores. The 25th percentile of pretest and post-test were 9.86 and 20.0, 50th percentile of pretest and post-test were 13.56 and 21.5, 75th percentile of pretest and post-test were 15.19 and 23.35. So, the 25th percentile of post-test knowledge score (20.0) fell beyond the 75th percentile of pre-test (15.19) which indicate a marked gain in knowledge among the participants and effectiveness of Planned Teaching Programme on knowledge regarding prevention of ARI.

➢ *Section IV- Findings Related to the Association between Pretest Knowledge Level and Selected Variables.*

(Age, educational status, socioeconomic condition, type of family, number of children, number of under five children, previous knowledge regarding prevention of ARI in percentage distribution).

In order to find out the association between pre-test knowledge score with selected variables, the following hypothesis were formulated.

- H2 – There is significant association between pretest knowledge scores with selected variables at 0.05 level of significance.
- To test the research hypothesis, null hypothesis was formulated.
- H02 - There is no significant association between pretest knowledge scores with selected variables at 0.05 level of significance.

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Table 7 Chi-Square Values Computed between Pretest Knowledge Score and Age, Educational Status of Mothers

Sl No	Variable	<Median	Equal or>Median	Chi-square Value	Degree ofFreedom	Level of significance	Table Value	Remarks
1	Age in year							
	Up to 20 years	8	2	**16.28****	**3**	**0.01**	**7.82**	**Significant**
	21-25 years	19	27					
	26-30 years	12	22					
	>30 years	3	7					
2	Educational status							
	From illiterate to Primary education	13	5	**16.65****	**4**	**0.01**	**9.49**	**Significant**
	Middle class(V-VIII)	19	14					
	Secondary education (IX-X)	8	21					
	Higher secondary (XI-XII)	3	8					
	Above higher secondary	1	8					

- The data presented in Table 7 shows that the calculated chi-square value of age (16.28) and educational status (16.65) were more than tabulated chi-square value at 0.01 level of significance.

Table 8 Chi-Square Values Computed between Pretest Knowledge Score and Occupation, Monthly Family Income, Type of Family, No. of Children and No. of Under Five Children of Mothers N=100

Sl. No	Variable	<Median	Equal or >Median	Chi-Square value	Degree of freedom	Level of significance	Table Value	Remarks
1.	**Occupation** Self-employed Home maker	 7 34	 3 56	2.64	1	0.05	3.84	Not Significant
2.	**Monthly family income (inRs.)** <3000/- 3001/-6000/ >6000/	 14 21 7	 6 27 25	**11.81****	**2**	**0.01**	**5.99**	**Significant**
3.	**Type of family** Nuclear Joint	 30 11	 34 25	2.53	1	0.05	3.84	Not Significant
4.	**No. of children** One Two Three	 27 12 2	 41 17 1	**9.14****	**2**	**0.01**	**5.99**	**Significant**
5.	**No. of under five children** One Two	 40 1	 55 4	0.263	1	0.05	3.84	Not Significant

- The data presented in Table 8 shows that the calculated chi-square value of monthly family income (11.81) and no. of children (9.14) were more than tabulated chi-square value at 0.01 level of significance.

ISSN No:-2456-2165

Table 9 Chi-Square Values Computed between Pretest Knowledge Score and Episodes of ARI, Received Information Regarding Prevention of ARI, Sources of Information N= 100

Sl. No	Variable	<Median	Equal Or>Median	Chi-Square value	Degree of freedom	Level of significance	Table Value	Remarks
1.	**Episodes of cold/year**							
	< 3 times/year	17	14					Not
	3-6 times/year	17	33	3.6	2	0.05	5.99	Significant
	>6 times /year	7	12					
2.	**Received information**							
	Yes	15	36	**5.78****				
	No	26	23		**1**	**0.01**	**3.84**	**Significant**
3.	**Sources of received information**							
	Health personnel							
	Neighbors/friends/Relative/ family members	9	31	**34.59*****	**2**	**0.001**	**5.99**	**Significant**
	Media	5	4					
		1	1					

- The data presented in Table 9 shows that the calculated chi-square value of received information (5.78) regarding prevention of ARI and sources of information (34.59) were more than tabulated value at .01 and 0.001 level of significance respectively.

ISSN No:-2456-2165

CHAPTER FIVE
DISCUSSION

This chapter deals with the major findings of the study, discussion with other related studies, conclusions and implication of the study in the field of nursing education, administration, nursing practice and nursing research. The limitations of the study havebeen stated and the recommendations for the future research in different aspects have also been presented.

➢ *Major Findings of the Study*

Major findings of the study are summarized as below:

- *Description of demographic characteristics*

✓ 46% of mothers belong to the 21-25 years of age group.
✓ 33% of mothers have middle class (V-VII) educational qualification.
✓ Most that is 90% of the mothers are homemaker.
✓ 48% mothers reported that they had a totalfamily income within Rs. 3001/-6000/ permonth.
✓ 64% of mothers belong to nuclear family and 36% of mothers belong to joint family.
✓ Majority 68% of mothers have one child and minimum 3% of mothers have three children.
✓ Most that is 95% of mothers have one under five children.
✓ 50% of mothers reported three to six episodes of cold /year of their under five children.
✓ 51% of mothers got information regarding prevention of ARI.
✓ 40% mothers gotinformation regarding prevention of ARI from health personnel.

- *Findings Related to Effectiveness of Planned Teaching Program.*

✓ Actual mean % gain (38.67%) happened in the area of clinical manifestations and minimum actual mean % gain (27.34%) happened in the area of definition part.
✓ Mean pre-test and post-test knowledge score were 15.57 and 23.75 respectively with a mean difference of 8.18.

Present study findings	Supportive study findings
1. The present study is to find the effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengalwithpre-experimental research approach and one group pre-test post testresearch design. Result shows that the post test knowledge score (23.75) of mothers is significantly higher than the mean pre-test knowledge score (15.57) with a mean difference of (8.18). The S.D (2.26) of knowledge score in post-test is less than the S.D (3.59) of knowledge score in pre-test and indicates marked knowledge.	1.1 Jena Mamata conducted a study on Effectiveness of Information Booklet on Knowledge and Practice about prevention of pneumonia among mothers of under five children at Bhubaneswar, Odishawith pre-experimental research approach and one group pre test and post test research design. Result of the study revealed that the mean post test knowledge score (19.94) of the mothers of under five children on prevention of pneumonia was higher than their mean pretest knowledge score (11.54). The standard deviation of post-test (2.11) was less than pretest (2.19) which indicated that there is marked gain in knowledge in the post-test than pretest.The calculated‘t’ value of 35.78 with a mean difference of 8.4 for df (49) was much greater than the table value of ‘t’ at 0.05 significance level is 2.01.So, the study was effective.

- Standard deviation of pre-test and post-test knowledge score were 3.59 and 2.26 respectively.

✓ The mean difference 8.18 was a true difference because it was found to be statistically significant as evident from‘t’ value (19.48***) at 0.001 level of significance and suggested the effectiveness of planned teaching program regarding prevention of ARI.
✓ Findings related to the association between pre-test knowledge score with selected variables(Age, educational status, socioeconomic condition, type of family, number of children, number of under five children, previous knowledge regarding prevention of ARI in percentage distribution).
✓ There was significant association between pre-test knowledge score and age (X^2=16.28**, P<.01), educational status (X^2=16.65**, P<.01), monthly family income (X^2=11.81**, P<.01), no. of children (X^2=9.14**, P<.01), received information regarding prevention of ARI (X^2=5.78**, P<.01), sources of information (X^2=34.59***, P<.001).

➢ *Discussion in Relation to Other Studies*

In this section findings of the study have been discussed with the reference to the result obtained by the investigator.

ISSN No:-2456-2165

Present study findings	Supportive study findings
Gain in the post-test than pre-test and calculated 't value of 19.48*** for df(99) is much greater than table value at 0.001 level of significance.So,the researcher concludes that PTP is effective in increasing the knowledge of mothers.	1.2 Mali Sachin conducted a quasi-experimental study to evaluate the effectiveness of structure teaching programme on domiciliary management and prevention of upper respiratory tract infections among the mothers of under five children at urban slums, Bangalore. The finding of the study revealed that over all pre tests and post test mean knowledge ondomiciliary management and prevention of upper respiratory tract infections in experimental group was 48.8% and 79.7% with standard deviation of 8.8% and 7.5%. Enhancement in over all knowledge score was 30.9% with a standard deviation of 4.2%, paired't' test value of 40.30* which was found statistically significant at 5% level.

ISSN No:-2456-2165

CHAPTER SIX
CONCLUSION

On the basis of the findings of the study the following conclusion can be drawn.

- Assessment of knowledge regarding prevention of ARI among mothers of under five children is not adequate as evident by structured interview schedule on knowledge.
- PTP on knowledge regarding prevention of ARI is effective to enhance knowledge of the mothers of under five children. The mothers have accepted the planned teaching program highly.
- There is association between pre-test knowledge scores of mothers and age, educational status, monthly family income, no. of children, previous knowledge, sources of received information.

- *Implication*

The findings of the study have implications tovarious fields like:

- Nursing administration
- Community health Nursing
- Nursing research.

- *Nursing Administration*

Reviewing the prioritized area for proving nursing care is the most important aspect of nursing administrators. The protocol to make the people, especially the mother's aware about child care and how to prevent the preventable childhood diseases may be developed. The DPHNO as Nurse Administrator will serve as a resource person for other nurses, students, patients, and relatives and she should take initiative to provide wideinformation regarding prevention of ARI to all community health nurses through continuity or in-service education progamme, since they have direct interaction with teachers, as well as students, when conducting school heath programme. Nurse administrator should plan and organize health education programme in school, ICDS centre,and communities. So, the information can be disseminated through a small group to the large group.

- *Community Health Nursing*

Planned Teaching Programme provides knowledge of a care giver about all the dimensions of community, community health problems and associated factors. So, it is the best way for knowledge assessment of caregiver.

- In Community Health Nursing, the mode of delivery of health care services is of two types:

✓ Services to individual, family and group
✓ Services to Community.

Education is a key component in improving the knowledge of an individual. The present study reveals that 49% mothers had no received information regarding prevention of ARI. So, community health nurse can provide developmental interventions to the individual, family, group as well as community. Hence, the present study enriches community Health Nursing practices.

- *Nursing Research*

There is an extended and intensive nursing research in the area of under five children. ARI is one of important causes of under five mortality and morbidity. The findings of the study will be advantageous to mothers for early detection of ARI among their under five children and change their attitude and help in incorporate good practice regarding prevention of ARI. Research should be done in practising modern method of teaching, focussing its quality and cost effectiveness. So, there is good scope for nurses to conduct research in the area to find the effectiveness of various strategies to educate mothers, their care givers and the public at large.

- *Limitation*

The findings cannot be generalized because of the following reasons.

- Non probability convenient sampling used in the study.
- Two ICDS centres are taken for the study.
- No attempt is made to do the follow up to measure the retention of the knowledge of the health personnel.

➢ *Recommendation*

Keeping in view the findings of the presented study, the following recommendations are made:

- A similar study can be replicated by a large number of sample.There by the findings can be generalized for population.
- A similar study can be done using a control group.
- A comparative study can be done to assess the knowledge between urban and rural mothers.
- A similar study can be done with time series research design to assess the effectiveness of planned teaching program for prolonged time in terms of knowledge score.
- A similar study can be replicated at different rural settings.
- Study can be conducted using other teaching strategies like video based teaching programme, Information booklet.
- Similar study can be done among school children by random sampling technique.
- After a validPlanned Teaching Programmeprogramme ondifferent groups, a prospective study on knowledge,attitude practice about ARI can be evaluated.

➢ *Summary*

This chapter was dealt with the summary of the study findings, discussion and implication to the nursing field that is nursing administration, community health nursing,nursing research and limitation experience by the investigator and recommended action for the further research.

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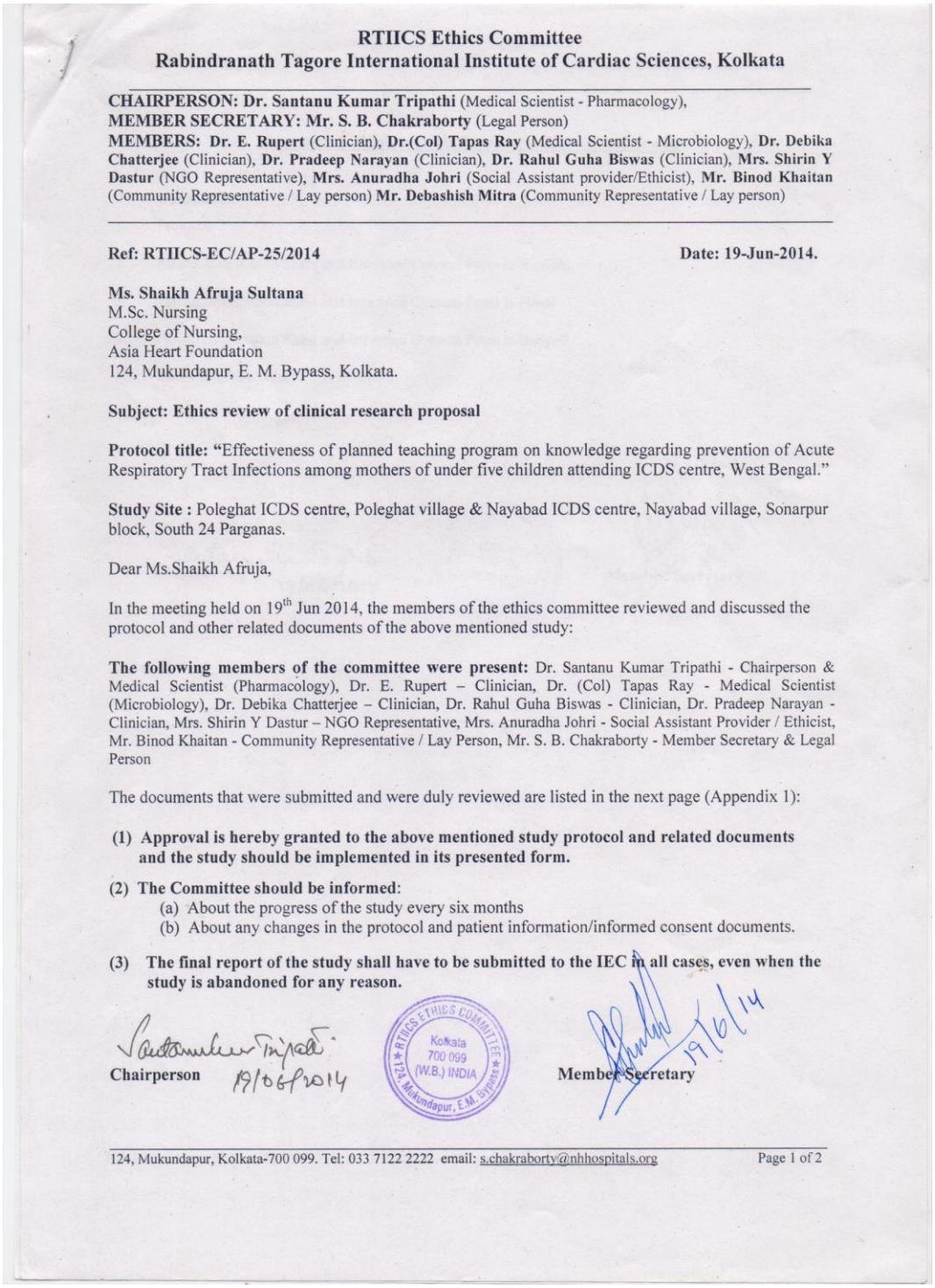
➢ *Internet:*

- http://www.indianpediatrics.net/jan2010/jan-88-89.htm
- http://timesofindia.indiatimes.com/india/5000-under-5-children-die-in-India-everyday-UNICEF/articleshow/5251602.cms
- http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data_files/Mizoram/Chapter_3.pdf
- http://www.ijrhs.com/issues.php?val=Volume2&iss=Issue1
- http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3042727/
- http://zeenews.india.com/exclusive/diarrhoea-and-pneumonia-the-biggest-killer-diseases-of-kids_6262.html
- http://www.indianpediatrics.net/mar2011/191.pdf

APPENDIX A1

➢ *Permission letter from ethical committee.*



RTIICS Ethics Committee
Rabindranath Tagore International Institute of Cardiac Sciences, Kolkata

CHAIRPERSON: Dr. Santanu Kumar Tripathi (Medical Scientist - Pharmacology),
MEMBER SECRETARY: Mr. S. B. Chakraborty (Legal Person)
MEMBERS: Dr. E. Rupert (Clinician), **Dr.(Col) Tapas Ray** (Medical Scientist - Microbiology), **Dr. Debika Chatterjee** (Clinician), **Dr. Pradeep Narayan** (Clinician), **Dr. Rahul Guha Biswas** (Clinician), **Mrs. Shirin Y Dastur** (NGO Representative), **Mrs. Anuradha Johri** (Social Assistant provider/Ethicist), **Mr. Binod Khaitan** (Community Representative / Lay person) **Mr. Debashish Mitra** (Community Representative / Lay person)

Ref: RTIICS-EC/AP-25/2014 **Date: 19-Jun-2014.**

Ms. Shaikh Afruja Sultana
M.Sc. Nursing
College of Nursing,
Asia Heart Foundation
124, Mukundapur, E. M. Bypass, Kolkata.

Subject: Ethics review of clinical research proposal

Protocol title: "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

Study Site : Poleghat ICDS centre, Poleghat village & Nayabad ICDS centre, Nayabad village, Sonarpur block, South 24 Parganas.

Dear Ms.Shaikh Afruja,

In the meeting held on 19th Jun 2014, the members of the ethics committee reviewed and discussed the protocol and other related documents of the above mentioned study:

The following members of the committee were present: Dr. Santanu Kumar Tripathi - Chairperson & Medical Scientist (Pharmacology), Dr. E. Rupert – Clinician, Dr. (Col) Tapas Ray - Medical Scientist (Microbiology), Dr. Debika Chatterjee – Clinician, Dr. Rahul Guha Biswas - Clinician, Dr. Pradeep Narayan - Clinician, Mrs. Shirin Y Dastur – NGO Representative, Mrs. Anuradha Johri - Social Assistant Provider / Ethicist, Mr. Binod Khaitan - Community Representative / Lay Person, Mr. S. B. Chakraborty - Member Secretary & Legal Person

The documents that were submitted and were duly reviewed are listed in the next page (Appendix 1):

(1) Approval is hereby granted to the above mentioned study protocol and related documents and the study should be implemented in its presented form.

(2) The Committee should be informed:
(a) About the progress of the study every six months
(b) About any changes in the protocol and patient information/informed consent documents.

(3) The final report of the study shall have to be submitted to the IEC in all cases, even when the study is abandoned for any reason.

Chairperson 19/06/2014 **Member Secretary** 19/6/14

RTIICS ETHICS COMMITTEE Kolkata 700 099 (W.B.) INDIA 124, Mukundapur, E.M. Bypass

124, Mukundapur, Kolkata-700 099. Tel: 033 7122 2222 email: s.chakraborty@nhhospitals.org Page 1 of 2

RTIICS Ethics Committee
Rabindranath Tagore International Institute of Cardiac Sciences, Kolkata

Appendix 1: Study related documents that were reviewed

Documents:

1. Protocol
2. Patient Information Sheet and Informed Consent Form in English,
3. Patient Information Sheet and Informed Consent Form in Hindi
4. Patient Information Sheet and Informed Consent Form in Bengali
5. Data Collection form

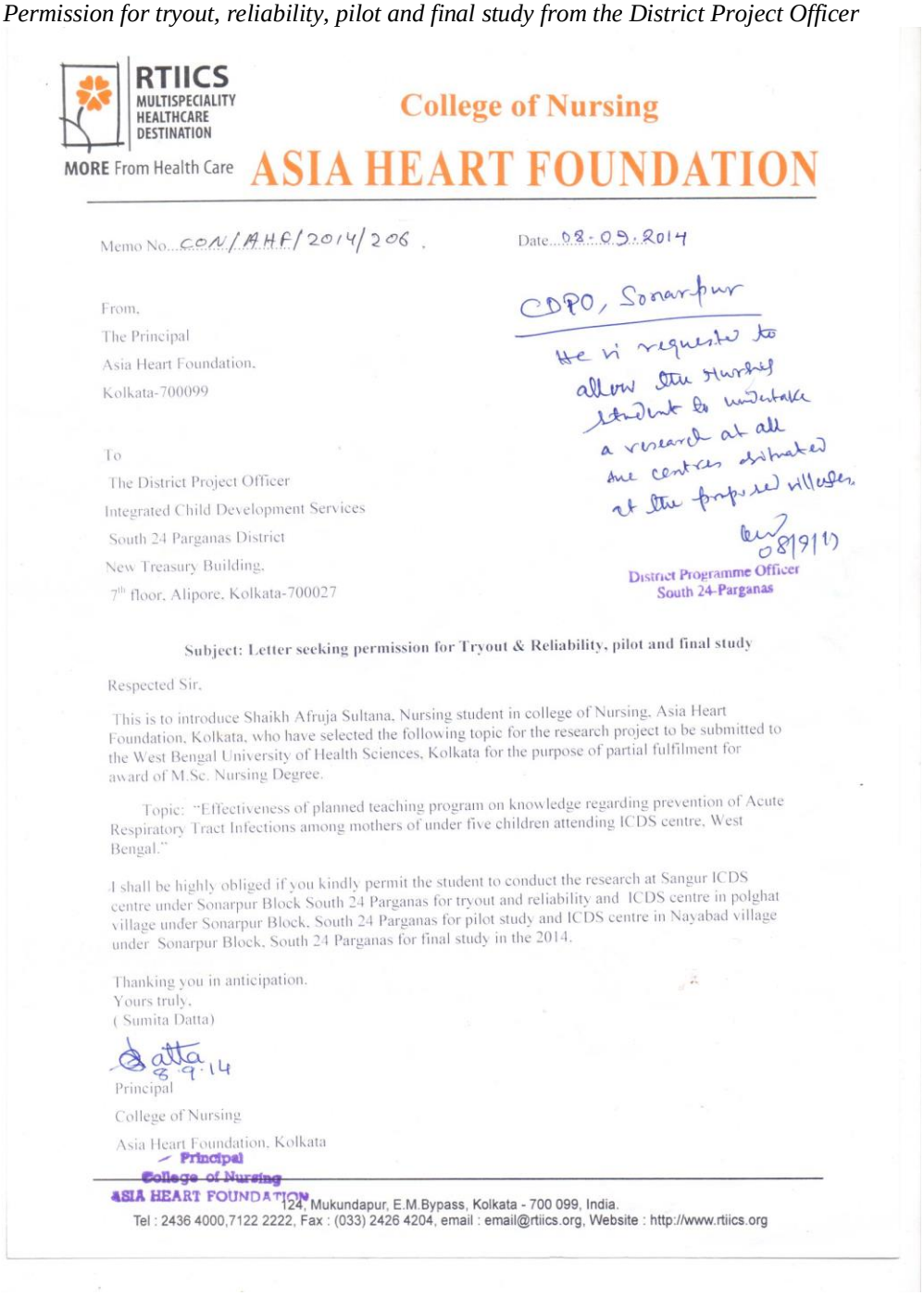
Chairperson 19/06/2014

RTIICS ETHICS COMMITTEE Kolkata 700 099 (W.B.) INDIA 124, Mukundapur, E.M. Bypass

Member Secretary 19/6/14

APPENDIX A2

➢ *Letter seeking Permission for tryout, reliability, pilot and final study from the District Project Officer*



RTIICS
MULTISPECIALITY HEALTHCARE DESTINATION
MORE From Health Care

College of Nursing
ASIA HEART FOUNDATION

Memo No. CON/AHF/2014/206 Date. 08.09.2014

From,
The Principal
Asia Heart Foundation,
Kolkata-700099

CDPO, Sonarpur
He is requested to allow the Nursing student to undertake a research at all the centres allotted at the proposed villages.
08/9/14
District Programme Officer
South 24-Parganas

To
The District Project Officer
Integrated Child Development Services
South 24 Parganas District
New Treasury Building,
7th floor, Alipore, Kolkata-700027

Subject: Letter seeking permission for Tryout & Reliability, pilot and final study

Respected Sir,

This is to introduce Shaikh Afruja Sultana, Nursing student in college of Nursing, Asia Heart Foundation, Kolkata, who have selected the following topic for the research project to be submitted to the West Bengal University of Health Sciences, Kolkata for the purpose of partial fulfilment for award of M.Sc. Nursing Degree.

Topic: "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

I shall be highly obliged if you kindly permit the student to conduct the research at Sangur ICDS centre under Sonarpur Block South 24 Parganas for tryout and reliability and ICDS centre in polghat village under Sonarpur Block, South 24 Parganas for pilot study and ICDS centre in Nayabad village under Sonarpur Block, South 24 Parganas for final study in the 2014.

Thanking you in anticipation.
Yours truly,
(Sumita Datta)

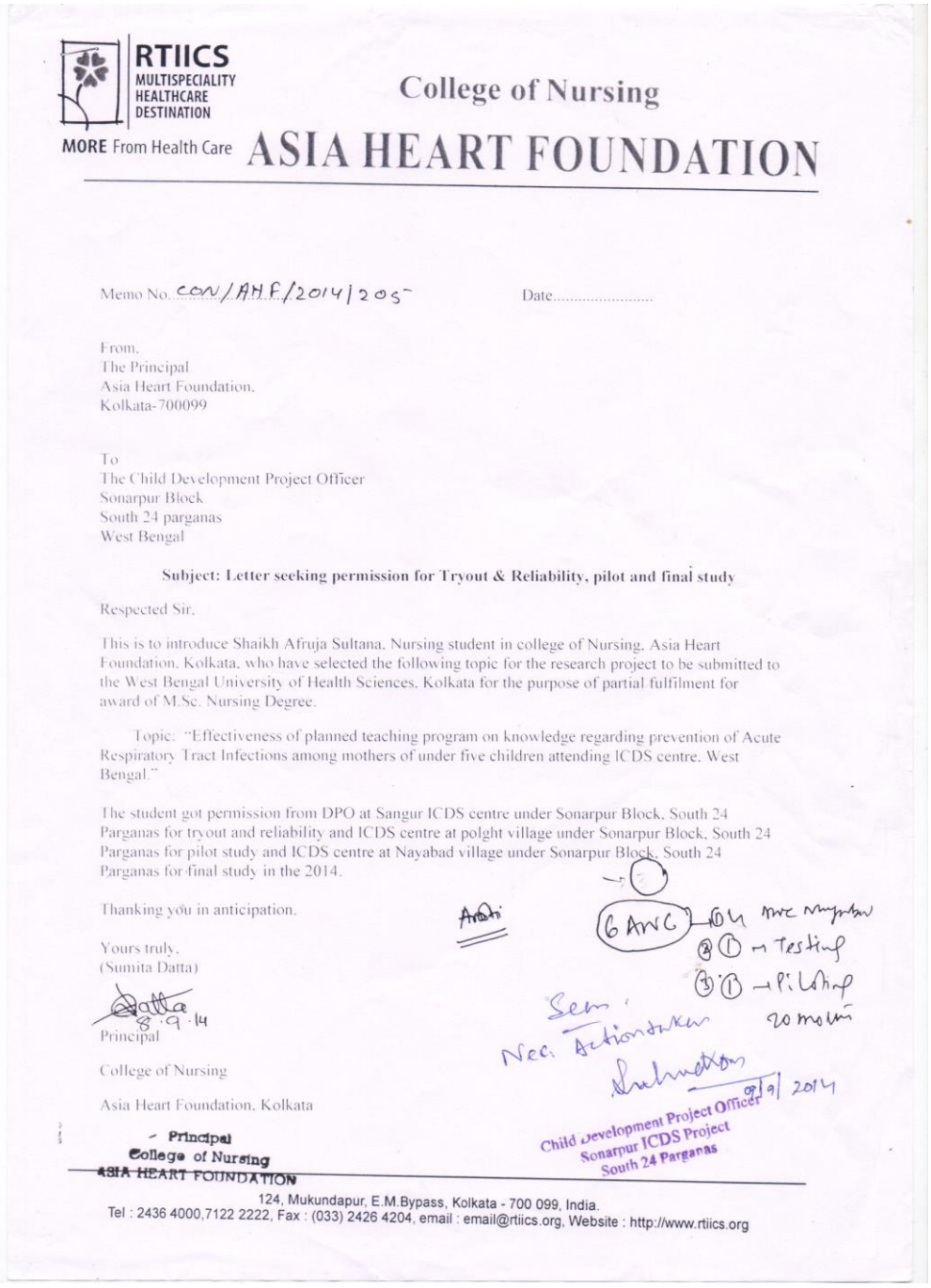
Datta 8.9.14
Principal
College of Nursing
Asia Heart Foundation, Kolkata

Principal
College of Nursing
ASIA HEART FOUNDATION

124, Mukundapur, E.M.Bypass, Kolkata - 700 099, India.
Tel : 2436 4000,7122 2222, Fax : (033) 2426 4204, email : email@rtiics.org, Website : http://www.rtiics.org

APPENDIX A3

- *Letter seeking Permission for tryout, reliability, pilot and final study from the ChildDevelopment Project Officer*



RTIICS
MULTISPECIALITY HEALTHCARE DESTINATION
MORE From Health Care

College of Nursing
ASIA HEART FOUNDATION

Memo No. CON/AHF/2014/205 Date.....

From,
The Principal
Asia Heart Foundation,
Kolkata-700099

To
The Child Development Project Officer
Sonarpur Block
South 24 parganas
West Bengal

Subject: Letter seeking permission for Tryout & Reliability, pilot and final study

Respected Sir,

This is to introduce Shaikh Afruja Sultana, Nursing student in college of Nursing, Asia Heart Foundation, Kolkata, who have selected the following topic for the research project to be submitted to the West Bengal University of Health Sciences, Kolkata for the purpose of partial fulfilment for award of M.Sc. Nursing Degree.

Topic: "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

The student got permission from DPO at Sangur ICDS centre under Sonarpur Block, South 24 Parganas for tryout and reliability and ICDS centre at polght village under Sonarpur Block, South 24 Parganas for pilot study and ICDS centre at Nayabad village under Sonarpur Block, South 24 Parganas for final study in the 2014.

Thanking you in anticipation.

Yours truly,
(Sumita Datta)
8.9.14
Principal

College of Nursing

Asia Heart Foundation, Kolkata

Principal
College of Nursing
ASIA HEART FOUNDATION

Child Development Project Officer 09/9/2014
Sonarpur ICDS Project
South 24 Parganas

124, Mukundapur, E.M.Bypass, Kolkata - 700 099, India.
Tel : 2436 4000,7122 2222, Fax : (033) 2426 4204, email : email@rtiics.org, Website : http://www.rtiics.org

ISSN No:-2456-2165

APPENDIX B1

➢ *Letter requesting expert's opinion & suggestion for validation of tools&content validity of Planned Teaching Programme*

To

.....

……

……..

Subject: Application for seeking expert opinion and suggestions for tool validation&content validity of Planned Teaching Programme

Respected Sir/ Madam,

I am Shaikh Afruja Sultana, student of M.Sc. Nursing of College of Nursing; Asia Heart Foundation would like to conduct a research study on;

Topic-"Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

As a part of course curriculum which is to be submitted to the West Bengal University of Health Sciences for the award of M.sc Nursing. In this regard I have developed tool and content for the above mentioned topic which is enclosed along with the letter. I request you kindly go through the tool& content and give your expert and valuable opinion for modification and improvement.

I shall be grateful to you for your valuable remarks and opinion.

Thanking you.

Yours Sincerely,
Shaikh Afruja Sultana
M.sc. Nursing, 2nd year
College of Nursing
Asia Heart Foundation
Date-

ISSN No:-2456-2165

APPENDIX B2

- *Letter seeking the consent of the participants -English version*

Letter seeking the consent of the participants:

Informed consent form for rural community mothers who having under five children
Part-I: Information Sheet:
Dear participants,

I, Shaikh Afruja Sultana, M.Sc. Nursing student of Asia Heart Foundation, Kolkata. I am conducting a research study on the:

Title:
"Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

Introduction:
Acute respiratory infection (ARI) in under-five children is one of the main public health problems in India. It is the major cause of morbidity and mortality in infants and young children below age five due to lack of mothers' knowledge regarding prevention of ARI. So, Planned Teaching Programme regarding prevention of ARI is very necessary.

Purpose:
The main purpose of this study is to find out the effectiveness of planned teaching programme onmothers' knowledge regarding prevention of ARI.

Procedure:
Informed consent will be taken from you.
Structured interview schedule will be provided which you have to answer for assessment your knowledge level regarding prevention of respiratory infections.
After assessment, planned teaching program will be given to you regarding prevention of Acute Respiratory Infections.
Again Structured interview schedule will be provided which you have to answer for reassessment of your knowledge level whether it is increased or not.

Duration of the procedure:
The total duration of the procedure will be 9 days that is it will be taken for 1 hour 30 minutes on 1st, 2nd and 9th day.

Participant selection:
We are inviting you because under five children's mortality and morbidity is high due to Acute Respiratory Infections**.**

Voluntary participation:
You can voluntarily participate in the study and you can withdraw yourself from the study at any time. It is your choice and all of your rights will still be respected**.**
No risk:
There is no risk associated with the participation in the study. The participants will not have any problems or inconvenience during the study.

Benefit:
Direct Benefit:
You will be able to know that your children's health status and how to prevent your children from Acute Respiratory Tract Infections.

Indirect Benefit:
The study will provide a little bit contribution to the society and help to protect from ARI in future.

Compensation:
Investigator will reach to the participant for doing whole procedure.
Reimbursements:
You will not be given money or gifts for taking part in research study**.**
Confidentiality:
I assure that the information given by you will be kept confidential and used only for the purpose of my study. I also assure you that anonymity will be maintained throughout the study.
Sharing the results:
Information given by you will not be used for other purpose. Collected data and result of the study will be stored in secure place and not shared with any other persons without your permission.

Who to contact:
If you have any questions, you may ask them now or later, even after the study has started, if you wish to ask questions later, you may contact my phone no. i.e., 8373879735 will be grateful to you for extending your cooperation to complete the study.

Part-II CERTIFICATE OF CONSENT:
I here read the forgoing information/ it has been read to me. I have understood all that has been read and had my question answered satisfactory. I understand that I can change my mind at any stage. I will get benefit from this study and I am willing to participate voluntarily in the study of Miss Shaikh Afruja Sultana.

Participant's name:

Signature of the participant
LTI
Date

Name of the Witness (if illiterate)

Signature of the witness
Date:

I certify that she understand the nature and the purpose of the study. She has been given opportunity to ask questions which have been answered correctly to the best of my ability. She consents voluntarily to participate in the study.

Signature of the person
Taking consent/ investigator
Dare: Time:
Name**:**

ISSN No:-2456-2165

APPENDIX C1

➢ *Proforma for experts' opinion for validation of tool I- section A*

(Interview Schedule for demographic data of the mothers of under five children)
Kindly go through the criteria listed below which has been formulated for evaluating the tool. There are responses column in the checklist namely agree and disagree.
Evaluators are requested to go through the tool and express the opinion by making the specific column of the criteria checklist.
Your expert opinion and suggestion will be highly appreciated.

Item No	Agree	Partial Agree	Disagree	Remarks

ISSN No:-2456-2165

Proforma for experts' opinion for validation of tool I- section B
(Interview Schedule knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children)
Kindly go through the criteria listed below which has been formulated for evaluating the tool. There are responses column in the checklist namely agree and disagree.
Evaluators are requested to go through the tool and express the opinion by marking the specific column of the criteria checklist.
Your expert opinion and suggestion will be highly appreciated.

Item No	Agree	Partial Agree	Disagree	Remarks

ISSN No:-2456-2165

APPENDIX C2

➢ *Evaluation criteria checklist for Planned Teaching Programme regarding prevention of ARI*

Instruction: The expert is required to go through the following evaluation criteria checklist prepared for the planned teaching programme on knowledge regarding prevention of Acute Respiratory Tract Infections. Then he or she is requested to put a tick mark( ) in the proportionate column and facilitate remarks in the remarks column.

Interpretation of column:

1. Is appropriate ..... column 1
2. Need modification ..... column 2
3. Inappropriate ..... column 3

Sl. No.	Content Correct information Adequate information Relevance to the topic Up to date information	1	2	3	Remarks
	Organization of content Logical sequence Continuity Integration				
	Language Sample Easy to understand Comprehensive at the level of learner ability				
	Feasibility Acceptable to the subject Suitable for subject				
	Practicability Self instructional Material is sufficient				
	Overall organization Attractive Relevant Interesting				

❖ Any other suggestion

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APPENDIX C3

➢ *List of experts for validation and language experts*

Sl No	Name of Validators	Designations	Specializations
V1	Prof. Dr. Raghunath Misra	HOD, Dept. of Community Medicine, I.P.G.M.E & R, Kolkata-20	Community Medicine
V2	Prof. SupritiJati	Vice-Principal, B.M Birla College of Nursing	Community Health Nursing
V3	Prof. Bandana Das	Prinicipal, Neotia Academy of Nursing	Community Health Nursing
V4	Prof. Pranati Pal	Principal, College of Nursing, National Medical college & Hospital	Community Health Nursing
V5	Madam Piyali Bose	Nursing Superintendent, Tata Medical Centre, Kolkata	Child Health Nursing
V6	Madam Mumtaz Begum	Associate Professor, B.M Birla College of Nursing	Child Health Nursing
V7	Madam Kaberi Das	Assistant Professor, College of Nursing, Asia Heart Foundation	Child Health Nursing
V8	Prof. TapatiSaha	Reader, W.B Govt. College of Nursing	Community Health Nursing
V9	Dr. Debasis Sinha	Associate Professor, Dept. of Community Medicine, I.P.G.M.E & R, Kolkata-20	Community Medicine
V10	Mr. Prabal Kanti Banerjee	Assistant Teacher, SonarpurVidyapith,Sonarpur	M.A(Eng) &M.A (Beng), B.Ed
V11	Mrs. Sibani Datta Chattopadhyay	Assistant Teacher, SonarpurVidyapith,Sonarpur	M.A(Eng), B.Ed

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APPENDIX D1

➢ *Certifying letter for the translation of the tool & content of PTP from English to Bengali*

CERTIFICATE FOR VALIDATION

This is to certify that the tool construction of Shaikh Afruja Sultana from College Of Nursing, Asia Heart Foundation, Kolkata to be used for her research study "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal." has been validated by me.

Signature:

Name: Sibani Datta Chattopadhyay.

Designation: Asstt. Teacher.

Date: 12/9/14

Seal: ESTD-1965 SONARPUR VIDYAPITH PO-Sonarpur Kol-150

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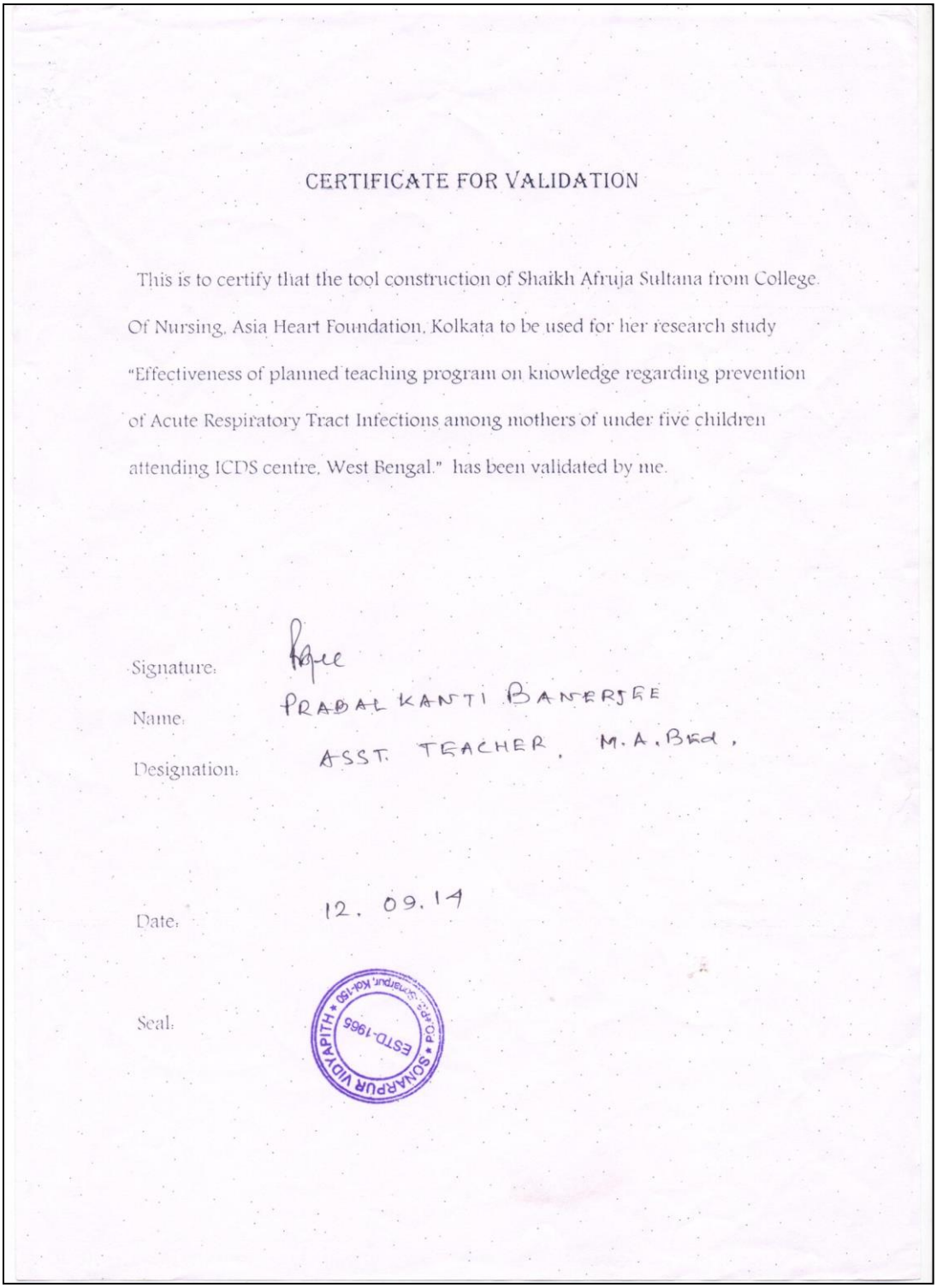
APPENDIX D2

- Certifying letter for the translation of the tool & content of PTP from Bengali to English



CERTIFICATE FOR VALIDATION

This is to certify that the tool construction of Shaikh Afruja Sultana from College Of Nursing, Asia Heart Foundation, Kolkata to be used for her research study "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal." has been validated by me.

Signature:

Name: PRABAL KANTI BANERJEE

Designation: ASST. TEACHER, M.A.,Bed.

Date: 12.09.14

Seal:

APPENDIX E1

➢ *Letter Requesting expert opinion and suggestions for editing*

From,
Shaikh Afruja Sultana Date-
2nd year student, M.sc Nursing
College of Nursing
Asia Heart Foundation
Mukundapur

To
……
……
……

Subject-Application for seeking expert opin ions for editing of the Thesis Paper

Respected Sir/Madam,
I am Shaikh Afruja Sultana, final year M.sc Nursing student of College Of Nursing; Asia Heart Foundation. I have selected the under mentioned topic for my research study to be submitted to the West Bengal University of Health Sciences for partial fulfillment of the University requirement of Master of Nursing programme.

Topic- "Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."

In this regard, I have developed a tool to assess the knowledge on prevention of ARI among mothers of under five children, Irequest you to kindly edit the thesis paper and give your expert and valuable opinion for modification and improvement.
I shall be grateful to you for your valuable remarks and opinion.
Thanking You

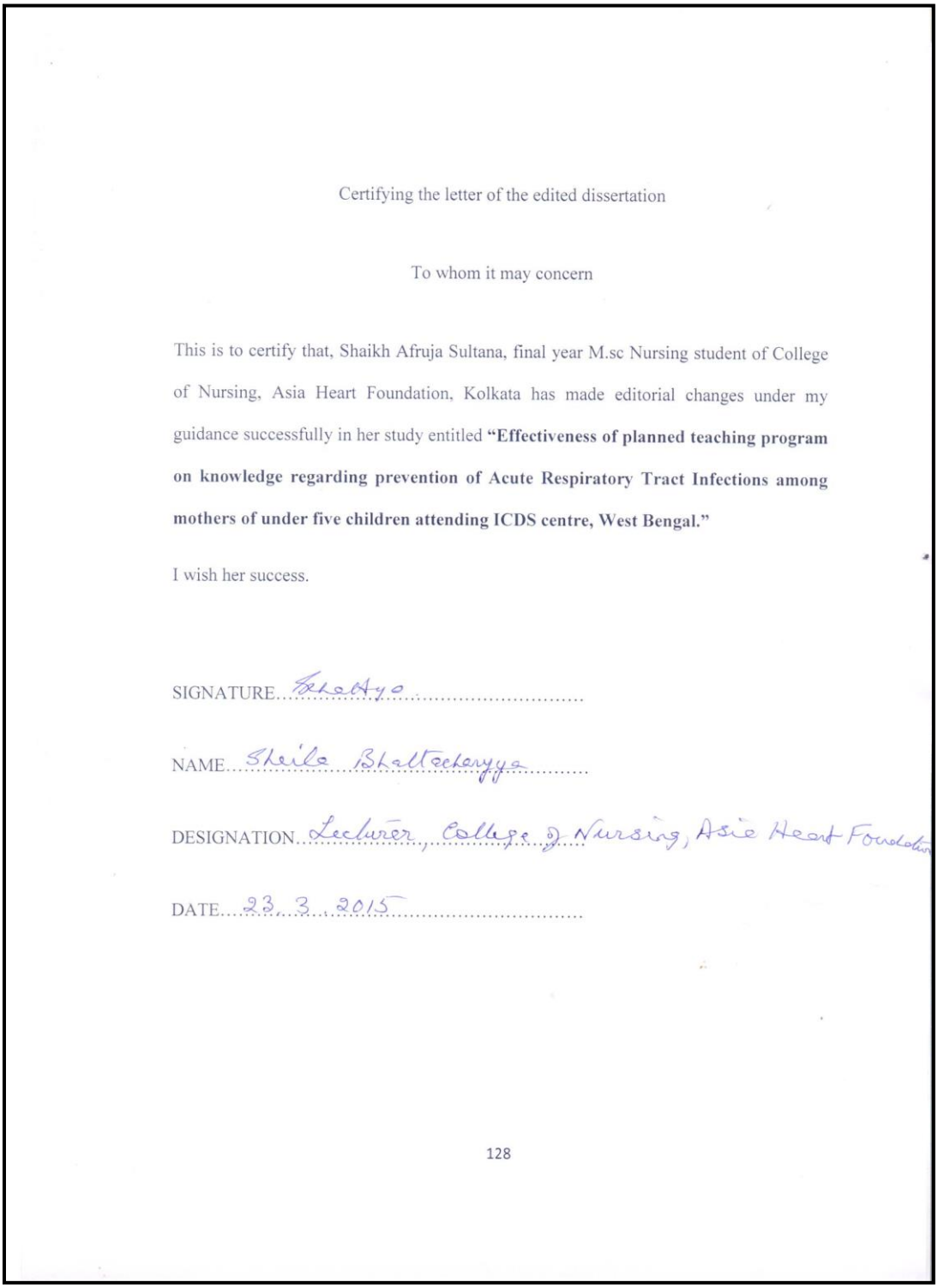
Yours Sincerely,

Shaikh Afruja Sultana
M.sc Nursing , 2nd Year
College of Nursing

Asia Heart Foundation

APPENDIX E2

- *Appendix Certifying the letter of the edited dissertation*



Certifying the letter of the edited dissertation

To whom it may concern

This is to certify that, Shaikh Afruja Sultana, final year M.sc Nursing student of College of Nursing, Asia Heart Foundation, Kolkata has made editorial changes under my guidance successfully in her study entitled **"Effectiveness of planned teaching program on knowledge regarding prevention of Acute Respiratory Tract Infections among mothers of under five children attending ICDS centre, West Bengal."**

I wish her success.

SIGNATURE...Bhattacharyya.....

NAME...Sheila Bhattacharyya.....

DESIGNATION...Lecturer, College of Nursing, Asia Heart Foundation

DATE...23.3.2015.....

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APPENDIX F1

- *Blue print*

TOPIC- Prevention of Acute Respiratory Tract Infection**Total no of Item-**26

SL. no	Content	Knowledge	Understanding	Application
1.	Definition	**Q-2,3**	**Q-1**	
2.	Factors influencing Acute Respiratory Tract Infections	**Q-4,14**		**Q-12**
3.	Clinical manifestations of ARI Preventive measures of ARI	**Q-7,9,10,11**	**Q-6,8**	
4.		**Q-13,16,19,22,23,24, 25,26**	**Q-5,15,20,21**	**Q-17,18**
Total		**60%**	**30%**	**10%**

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APPENDIX F2

➢ *Research Tool (English)*

Tool-1
Section- 'A'

Semi structured interview schedule on demographic data and socio-economic status
Purpose: Structured interview schedule is developed to know the demographic data of the sample subject.
Instruction: The investigator will ask question and put tick (√) mark against the answer given by the mothers of under five children.
Participant no:
Date of enrolment:

1. What is your age in completed years?
1.2 up to 20
1.3 21- 25
1.4 26- 30
1.5 31- 35
1.6 >35

2. What is your educational status? (completed class)
2.1 Illiterate
2.2 Can read and write (Without formal education)
2.3 Primary education (Class I- IV)
2.4 Middle class(Class V- VIII)
2.5 Secondary education (Class IX- X)
2.6 Higher secondary (Class XI-XII)
2.7 Above higher secondary

3. What is your occupation?
3.1 labourer
3.2 self-employed
3.3 home maker
3.4 Service
3.5 Others (specify) ----------

What is your family income per month (in Rs.)?
4.1 ≤ 3000/
4.2 3001/-6000/
4.3 6001/-9,000/
4.4 >9,000/

4. Which type of family do you belong to?
4.1 nuclear family
4.2 joint family
4.3 Extended family

5. How many children do you have?
5.1 one
5.2 two
5.3 three
5.4 more than three

6. How many under five children do you have?
6.1 One
6.2 Two
6.3 Three

8. How many times do your under five child suffer from cold in a year?

8.1 <3 times /year
8.2 3-6times/ year
8.3 > 6times/ year

9 Did you receive any information regarding prevention of ARI?
9.1 Yes
9.2 No

9.1 If yes, from where have you received information regarding prevention of ARI?
9.1.1 Health personnel (Doctor, Nurse, ICDS worker, ASHA)
9.1.2 Neighbors/ friends/ relatives/family members
9.1.3 Radio/TV/ Miking
9.1.4 Newspaper, Magazine, Leaflet
9.1.5 Others specify ----------

Section- 'B'
Structured interview schedule on knowledge on prevention of ARI
Purpose: Structured interview schedule is developed to assess the knowledge regarding prevention acute respiratory tract infection among the mothers of under five children.
Instruction: The investigator will ask questions and put tick (√) mark against the answer given by the mothers of under five children.

1. What do you mean by acute respiratory tract infection?
1.1 Headache , malaise
1.2 Common cold &cough , pneumonia
1.3 Diarrhea, vomiting

2 Who is commonly affected by acute respiratory tract infection?
2.1 Children
2.2 Adults
2.3 Mothers

3. How many times does a child suffer from ARI in a year?
3.1 1-3 times /year
3.2 3-6times/ year
3.3 > 6times/ year

4. What is the influencing factor causing ARI?
4.1 Delayed initiation of breastfeeding
4.2 Child is not willing to take food
4.3 Child is having dental problem

5. What type of disease is more increased due to not taking of immunization within proper time according to the immunization schedule?
5.1 Disease in abdomen
5.2 Disease related to respiratory tract
5.3 Cancer

6. What is the meaning of common cold and cough under the types of ARI?
6.1 Chest in drawing
6.2 Fast breathing
6.3 Running nose

7. Which one is the more dangerous clinical feature of pneumonia?
7.1 Cough
7.2 Fast Breathing
7.3 Fever

8. How to see the respiration rate of a child?
8.1 Touch the palm on back

8.2 Touch the palm on lower chest and abdomen
8.3 Touch the palm on head and forehead

9. What will be respiration rate of a one and half month child during pneumonia?
9.1 Respiration rate 40 breaths/min or above
9.2 Respiration rate 60 breaths/min or above
9.2 Respiration rate 50 breaths/min or above

10. Which one is the significant clinical feature of severe pneumonia?
10.1 Cold and cough
10.2 Chest in drawing
10.3 Nasal flaring
11. Which group of clinical features will be exhibited by a child with very severe disease?
11.1 Stridor, grunting respiration
11.2 Anorexia, anemia
11.3 Runny nose, abdominal distension

12. Whenwill you take a child aged under six months to health centre immediately?
12.1 Ough and cold
12.2 Not able to breastfeed
12.3 Constipation

13. When will you take a child aged four years to health centre immediately?
13.1 Cold and cough
13.2 Nasal block
13.3 Fast breathing

14. What is the following measure to prevent indoor air pollution?
14.2 Use of smoke Chula
14.2 Close the window
14.3 Avoid tobacco smoking

15. How can the body temperature of your 2 months baby be maintained?
15.1 Closing of door and window
15.2 Stop bathing
15.3 Kangaroo mother care

16. What type of place is suitable for the bathing of a child for the prevention of ARI?
16.1 Open place
16.2 Warm and closed place
16.3 Semi open place

17. Which one is the most important measure to be followed by the parents to prevent ARI?
17.1 Provision of safe drinking water
17.2 Practice hand washing before handling the child
17.3 Use of sanitary latrines

18. Which one is used as a home remedy for the management of ARI for above six months babies and under five children?
18.1 Tulsi juice with honey
18.2 coriander juice with black salt
18.3 Sugarcane juice
19. What are the following points should be kept in mind for prevention of ARI?
19.1 Exposure of skin under sunlight
19.2 Using clean cloths and personal hygiene
19.3 Using Synthetic cloths

20. What type of accommodation should be maintained for prevention of ARI?
20.1 congested room

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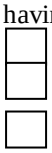
20.2 well ventilated room
20.3 Damped room

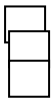
21. Whose contact should be kept away from a child for prevention of ARI?
21.1 Persons with heart disease
21.2 Persons with common cold
21.3 Persons with jaundice

22. What will you do when a child aged less than six months is having fever with ARI?
22..1 Frequent breastfeeding
22.2 Frequent feeding of water
22.3 Frequent feeding of fruit juice



23. How will you prepare the herbal tea for management of ARI for a baby aged more than six months or to below five?
23.1 Tea with mouri, elachi, ginger, sugar
23.2 Tea with cow milk and sugar
23.3 Tea with mouri and sugar

24. What will you do for early detection of ARI?
24.1 Regular urine testing
24.2 Regular health check up
24.3 Regular take health care



25. Which type of nasal drop will you use for clearing the nostril, when a child suffers from nasal congestion?
25.1. Boiled cool water with little bit salt
25.2 Tube well water with little bit salt
25.3 Cold water with little bit salt

26. When should a child not be sent to ICDS centrefor prevention of ARI?
26.1 Running nose
26.2 yellow and thickest nasal discharges
26.3 Accumulation of cough in chest

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APPENDIX F3

- Answer Keys

Tool-1	Question No.	Answer No.
Section B	1.	1.2
	2.	2.1
	3.	3.2
	4.	4.1
	5.	5.2
	6.	6.3
	7.	7.2
	8.	8.2
	9.	9.2
	10.	10.2
	11.	11.1
	12.	12.2
	13.	13.3
	14.	14.3
	15.	15.3
	16.	16.2
	17.	17.2
	18.	18.1
	19.	19.2
	20.	20.2
	21.	21.2
	22	22.1
	23.	23.1
	24.	24.2
	25.	25.1
	26.	26.1

ISSN No:-2456-2165

APPENDIX G1

➢ Content of Planned Teaching Programme (English)

➢ *Introduction:*

Acute respiratory tract infections and its complications are most frequent conditions of acute illness in infants and children. In, India ARI is one of the major causes of childhood death. It is also one of the major reasons for which children are brought to the hospitals and health facilities. Maximum children die at home due Acute Respiratory Tract Infections.

➢ *Definition:*

Acute Respiratory Tract Infections is an acute infection of any part of the respiratory tract and related structures. It may cause inflammation of respiratory tract anywhere from nose to alveoli with a wide range of combinations of symptoms and signs. Under five children are commonly affected by ARI. Average 3 – 6 episodes of ARI are seen per year.

➢ *Factors Influencing Acute Respiratory Tract Infections:*

Low birth weight: A LBW child is highly susceptible for any infection, more so for ARI.

- *Causes of Low Birth Weight are-*

✓ Chronic and systemic maternal disease-Tuberculosis, Hypertension, Diabetes, cancer, end stage of kidney disease.
✓ Maternal malnutrition- e.g., anaemia,Hyperthyroidism
✓ smoking during pregnancy
✓ Frequent child birth
✓ Inadequate rest and sleep
✓ extraneous labour

➢ *Failure of breastfeeding:*

This increases the chances of ARI. There are some causes as follows:

- *Maternal Causes-*

✓ Delay initiation of breastfeeding
✓ Acute puerperal illness
✓ Chronic medical illness- Tuberculosis, Heart Disease, HIV
✓ Infection and inflammation of breasts
✓ Inverted and cracked nipples of mother
✓ Working mother
✓ Faulty superficial nipple sucking technique
✓ Bottle feeding and give other liquid diet

- *Neonatal cause-*

✓ Temporary illness-nasal obstruction, jaundice, oral thrush
✓ Over distension of stomach with swallowed air
✓ Birth defect - Cleft palate and cleft lip

➢ *Malnutrition of the child:* This in general results in increases the incidence of ARI.
➢ *Dropout of immunization*- Lack of routine primary immunization as per schedule constitutes a major risk factor for acquiring the respiratory disease such as

- Tuberculosis is occurred whether BCG vaccine is not taken.
- Measles is occurred whether measles vaccine is not taken
- Diphtheria,whooping cough, tetanus are occurred when DPT vaccine is not taken.

➢ *Climatic variation*- ARI is mainly seen in winter and monsoon season.
➢ *Overcrowding house*- increases the risk of ARI.
➢ *Air pollution*: Air pollution following smoky Chula, overcrowded area predisposes the people for respiratory infections. Thus ARI incidence is more among urban children than rural children.
➢ *Smoking***:** both active and passive smoking predisposes the people for ARI. Thus, the children of cigarette and beedi smokers are prone for ARI
➢ *Lack of environmental sanitation*

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- *Poor Socioeconomic Conditions*: Socio-economic status is based on income, occupation and education.It is commonly conceptualized as the social standing or class of an individual or group. Poor socio-economic status causes lower education, poverty, and poor health. Chances of ARI is increased due to poor health.
- *Lack Of Knowledge Regarding Prevention of ARI*
- *Faulty Child Rearing Practices*
- *Clinical Manifestations of ARI.*
- No pneumonia (Common cough & cold) - Characterized by watery nasal discharge, cough and cold, sore throat, earache and without fever.

- *Pneumonia-*
  Characterized by Cough, fast breathing, no chest indrawing

Fast breathing depends on the age. When the children get older, their breathing rates slow down. At first, child's chest and abdomen must be exposed when the child is calm and watch the movement of abdomen or lower chest and count it in full one minute.

✓ *Fast breathing means when the respiratory rate is*

- 60 breaths per minute or more in a child less than 2 months of age.
- 50 breaths per minute or more in a child aged 2 months up to 12 months.
- 40 breaths per minute or more in a child aged 12 months up to 5 years.

- *Severe Pneumonia:*
  Characterized by chest indrawing, with or without fast breathing, nasal flaring, cyanosis, grunting, wheezing (soft musical noise when the child breathes out due to swelling and narrowing of small airways of the lungs.

➢ *Very Severe Disease:*Characterized by

- Not able to drink- A child who is no able to drink could have severe pneumonia or bronchiolitis.
- Abnormal sleepy (drowsiness) or difficult to wake
- Stridor in calm child - a child with stridor makes a harsh noise when breathing in.
- Grunting- abnormal short, deep, hoarse sounds in exhalation that often accompany severe chest pain.
- Wheezing - a child with wheezing makes a soft whistling noise or shows a sign that breathing out is difficult, wheezing is caused by narrowing of the air passage in the lungs.
- Cyanosis- it is the appearance of a blue coloration of the skin or mucous membranes due to the tissues near the skin surface having low oxygen saturation.
- Apnoea
- Fever or hypothermia
- Abdominal distension
- Convulsions
- Severe malnutrition

➢ *Preventive Measures of ARI:*

- *Promote Early and Regular Antenatal Care*

✓ Take light, nutritious, easily digestible and rich protein, carbohydrate(cellulose containing) , mineral and vitamins and plenty of fluids (at least 2-3 litre water / day)
✓ Iron folic acid tablet should be taken from sub centre.
✓ Take TT_1 and TT_2 immunization.
✓ Regular check up
✓ Institutional delivery

- *Prevention of hypothermia / Maintenance of body temperature for 6 months baby*

✓ Putting in mother's breast within half an hour of birth. Promote exclusive breastfeeding for the first six months and continue breastfeeding for two years. Whether any problem is present during breastfeeding, give expressed breast milk.
✓ No bath up to drying of the umbilical cord. Then bath should be given using lukewarm water in warm and closed room gently and quickly and baby should be dried swiftly and thoroughly from head to toe and wrapped in warm towel or clothing

✓ Baby should be kept in skin to skin contact with mother in kangaroo method to maintain temperature.
✓ Baby's wet nappy should be changed immediately after elimination.

- *Introduction proper weaning foods after six months of age*

✓ Breastfeed is not adequate after six months of baby and from this age the more energy riched nutritional supplement is introduced along with breastfeeding.
✓ These nutritional supplement foods are:soft mixture of rice and dal, pulses, mashed and boiled potato, vegetables, roti soaked in milk or dal, mashed papaya, seasonal fruits.

- *Conduct regular growth monitoring*

✓ Growth monitoring is done for detection of deviation from normal health and development, nutritional status associated problems.

- *Promote Immunization to under five children as per schedule.*

✓ Measles vaccine and DPT vaccines is very important to prevent Acute Respiratory Tract Infections.

- *Promote environmental pollution control*

✓ Improve airflow in living space by opening windows. Maintenance of warm and well ventilated environment.
✓ Whether any smoker is present in family, he/she will try to quit smoking or otherwise smoke outside the home.
✓ Smokeless Chula should be used in kitchen.

- *Personal Hygiene*

✓ Thorough hand washing must be done before handling the child.
✓ Suitable clean cotton cloths should be put on.
✓ Mouth and nose must be covered with clean cloths during sneezing and coughing.
✓ Used cloths must be cleaned with running and soap water and dry under sunlight.

➢ *Early recognition and management of ARI*

- Parents must be explained that small children often have cold and cough. Some danger signs may be occurred after common cold and cough. So, parents should be kept in mind the following danger signals and child with danger signs must be referred to health centre as early as possible. These danger signals are-
  Fast breathing
  Chest indrawing
  Child not able to drink or feed well
  Convulsion
  Abnormal sleepyor difficult to wake
  Stridor in calm child
- Younger Child cannot take food due to nasal block. So, mothers use lukewarm saline water as nasal drop and after using nasal drop, nostril should be cleared by soft clean and water soaked cloths for prevention of nasal congestion because of ARI.
- Sick children must be kept away from others. When children suffer from watery nasal discharge, should not be sent to school or ICDS centre.
- Some home remedies for prevention of ARI for older infant and under five children-
  Tulsi juice with honey
  Make a hot drink with the help of sugar, ginger, lemon, tulsi leaves
  Make an ayurvedic tea with the help of mouri, elachi, ginger, sugar.

➢ *Conclusion:*

So, we have known the risk factors related to Acute Respiratory Tract Infections. Whether we take the preventive measures among under five children or we can detect and treat Acute Respiratory Tract Infections as early as possible, incidence of ARI can be reduced.

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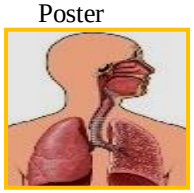
APPENDIX G2

➢ Lesson Plan of Planned Teaching Programme (English)

Subject : Nursing Research
Topic : prevention of Acute Respiratory Tract Infection
Group : Mothers of under five children
No of Participants : 100 mothers of under five children
Place : ICDS centre
Duration : 40 minutes
Time : 2pm -2.40 pm
Method of teaching : Lecture and Discussion
Audio-visual aids : Flash cards, posters
Language : Bengali
Name of student teacher : Shaikh Afruja Sultana
Name of Guide : Madam Usha Bir
Name of Co-guide : Madam Kuntal Mandal
Previous knowledge of participants: Partipants have some idea regarding prevention of ARI.
General objectives: After the end of the Planned teaching Program,mother will be able to-

- Describe theprevention of ARI
- Apply their knowledge for maintaining the good health of their under five children.

Time	Specific objectives	Content	Teaching Learning Activities	AV aids	Evaluation
1 min		**Introduction**: Acute respiratory tract infections and its complications are the most frequent conditions of acute illness in infants and children. In, India ARI is one of the major causes of childhood death.			
1 min		**Announcement of the topic:** Prevention of Acute Respiratory Tract Infection		Poster 	
1 min	The mother Defines the Acute Respiratory Tract Infection	**Definition of acute respiratory tract infections:** Acute Respiratory Tract Infection is an acute infection of any part of the respiratory tract and related structures.	Student teacher is defining and mother is understanding	Poster 	What do you mean by ARI?
9 min	List down the factors influencing Acute Respiratory Tract Infection	**Factors influencing acute respiratory tract infections:** Low birth weight: Failure of breastfeeding Maternal causes Neonatal causes Malnutrition of the child Drop out of immunization Climatic variation- Overcrowding house	Student teacher is describing and mother is responding	Posters	What are the influencing factors causing ARI?

		Air pollution Smoking		 	
Time	**Specific objectives**	**Content**	**Teaching Learning Activities**	**AV aids**	**Evaluation**
2 min 2 min 3 min 3 min	Enumerates clinical Manufesataionof ARI Explains common cold & cough Explains pneumonia Describes fast breathing assessment of ARI Explains severe pneumonia Explains very severe disease	Poor socioeconomic conditions Lack of knowledge regarding prevention of ARI Faulty child rearing practices **<u>Clinical manifestations of ARI</u>** **No pneumonia (Common cold) -** Characterized by clear nasal discharge, cough and cold, sore throat **Pneumonia**-Characterized by Cough, fast breathing ***Fast breathing Assessment:*** A child less than 2 months of age = 60 breaths per minute or more A child aged 2 months up to 12 months = 50 breaths per minute or more A child aged 12 months up to 5 years = 40 breaths per minute or more **Severe pneumonia:** Characterized by chest indrawing, with or without fast breathing, nasal flaring **Very severe disease:**Characterized by not able to drink, abnormal sleepy,stridor in calm child, wheezing cyanosis	Student teacher is describing and mother is understanding Student teacher is explaining And mother is understanding	 Poster  Flash cards  Live demonstration on fast breathing assessment  Poster	What do you mean by common cold & cough? What do you mean by pneumonia? How to assess the fast breathing? What do you mean by severe pneumonia? What do you mean by very severe disease?

3 min				 Posters 	

Time	Specific objectives	Content	Teaching Learning Activities	AV aids	Evaluation
7 min	Illustrates preventive measures of ARI	**Preventive measures of ARI:** Promote early and regular antenatal care Prevention of hypothermia / Maintenance of body temperature for six months baby Introduction of proper weaning foods after six months of age 4. Conduct regular growth monitoring Promote Immunization to under five children as per schedule 5. Promote environmental pollution control 7. Personal Hygiene 8. Early recognition and management of ARI: • Parents should be educated about some danger signals and if it is seen in child, refer to hospital as early as possible. • Nose should be cleared by soft clean and water soaked cloths for prevention of nasal congestion • Home remedies: Tulsi juice with honey hot drink with the help of sugar, ginger, lemon, tulsi leaves ayurvedic tea with the help of mouri, elachi, ginger, sugar	Student teacher is explaining and mother is understanding	Posters  	What are the preventive measures of ARI?
4 min	States early recognition and management of ARI		Student teacher is explaining and mother is responding	Poster  **Don't sent to school or ICDS dueto clear nasal discharge**  **Lukewarm saline water as nasal drop** Flash cards	Which points should be kept in mind for early recognition and management of ARI?

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					How to prepare home remedies for prevention of ARI?

Time	Specific objectives	Content	Teaching Learning Activities	AV aids	Evaluation
2 min		**Summarization:** Introduction Definition of ARI Factors influencing Acute Respiratory Tract Infections Classification of ARI Clinical manifestations of ARI Preventive measures of ARI General instructions regarding prevention of ARI			
1 min		**Conclusion:** Whether we take the preventive measures among under five children or we can detect and treat Acute Respiratory Tract Infections as early as possible, incidence of ARI can be reduced.			
1 min		**Evaluation:** How to differentiate between pneumonia and severe pneumonia?			