## CHAPTER V

<table>
<thead>
<tr>
<th>Chapter No</th>
<th>Content</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>Introduction</td>
<td>227</td>
</tr>
<tr>
<td>5.1</td>
<td>Title of the study</td>
<td>228</td>
</tr>
<tr>
<td>5.2</td>
<td>Objectives of the study</td>
<td>228</td>
</tr>
<tr>
<td>5.3</td>
<td>Variable</td>
<td>228</td>
</tr>
<tr>
<td>5.4</td>
<td>Operational definition</td>
<td>229</td>
</tr>
<tr>
<td>5.4.1</td>
<td>Development</td>
<td>229</td>
</tr>
<tr>
<td>5.4.2</td>
<td>Self-instructional manual</td>
<td>229</td>
</tr>
<tr>
<td>5.4.3</td>
<td>Acute Respiratory Infection</td>
<td>229</td>
</tr>
<tr>
<td>5.4.4</td>
<td>Knowledge</td>
<td>229</td>
</tr>
<tr>
<td>5.4.5</td>
<td>Practice</td>
<td>229 - 230</td>
</tr>
<tr>
<td>5.5</td>
<td>Assumptions</td>
<td>230</td>
</tr>
<tr>
<td>5.6</td>
<td>Hypotheses</td>
<td>230</td>
</tr>
<tr>
<td>5.7</td>
<td>Scope of the study</td>
<td>231</td>
</tr>
<tr>
<td>5.8</td>
<td>Delimitations of the study</td>
<td>231</td>
</tr>
<tr>
<td>5.9</td>
<td>Research design</td>
<td>232</td>
</tr>
<tr>
<td>5.10</td>
<td>Setting of the study</td>
<td>232 - 233</td>
</tr>
<tr>
<td>5.11</td>
<td>Findings of the study</td>
<td>233 - 243</td>
</tr>
<tr>
<td>5.12</td>
<td>Conclusion</td>
<td>244</td>
</tr>
<tr>
<td>5.13</td>
<td>Nursing implication</td>
<td>245</td>
</tr>
<tr>
<td>5.13.1</td>
<td>Nursing service</td>
<td>245</td>
</tr>
<tr>
<td>5.13.2</td>
<td>Nursing education</td>
<td>245 - 246</td>
</tr>
<tr>
<td>5.13.3</td>
<td>Nursing administration</td>
<td>246</td>
</tr>
<tr>
<td>5.13.4</td>
<td>Nursing research</td>
<td>246</td>
</tr>
<tr>
<td>5.13.5</td>
<td>Preventive medicine</td>
<td>247</td>
</tr>
<tr>
<td>5.14</td>
<td>Suggestions</td>
<td>247 - 248</td>
</tr>
<tr>
<td>5.15</td>
<td>Recommendations</td>
<td>248 - 249</td>
</tr>
<tr>
<td>5.16</td>
<td>Personal experience</td>
<td>249</td>
</tr>
</tbody>
</table>
CHAPTER V
Summary and conclusions and recommendations

5.0 INTRODUCTION

The threat posed by acute respiratory infection to child survival in India is tremendous. Although most of these illnesses are mild and self-limiting in nature, about ten to fifteen per cent progress to disease of moderate to severe intensity. Illness among the less than five-year children approximately fifteen to thirty per cent is contributed due to acute respiratory infection. ARI particularly pneumonia are leading cause of death and accounted for an estimated 3.9 million deaths among children under the age of five years in developing world during the year 1996. It is estimated that 0.75 million children under five years die due to ARI in India every year. Seven to ten per cent of all under-five children have ARI during first year of life. Studies have shown that on an average a child in urban slum has five to eight episodes per year with mean duration of seven to nine days. ARI accounts for thirty to fifty per cent of visits by children to health facility.

Child dies from pneumonia many deaths could be prevented. The key to their prevention is education of mothers, primary health care workers and training of health personnel and doctors. The C.S.S.M. programme (1992) led the training of primary health workers, health personnel and doctors. But the mother's education and regular reinforcement is neglected.

Child Survival cannot be imposed, it has to be attained and without the fullest involvement of informed and educated parents and the community, this will be impossible. This calls for a new kind of dialogue between health educators and the people and information and education is the basic tool to begin this dialogue. Information and education in child survival must be understood and recognized in the context of developing a value for child health.

The simple and essential massage about ARI and care during illness needs to be given to prevent four million deaths that are believed to occur annually in children in the first five years of life in developing countries keeping in view mothers education is an important factor the investigator felt the need to develop Self-instructional manual for mothers in caring the child with ARI.
5.1. Title of the study:
"A study to develop the self instructional manual for mothers in caring the under five year children with acute respiratory infection".

5.2 Objectives:

Phase I
1. To study the prevalence of acute respiratory infection (ARI) among less than five year children.
2. To assess the existing knowledge of mothers regarding ARI among less than five year children.
3. To find out the existing practices of mothers in care of the children with acute respiratory infection.
4. To assess the information need of mothers in caring the children with ARI.
5. To prepare a self-instructional manual for mothers in caring the children with ARI.

Phase II
1. To educate the mother regarding ARI by using self-instructional manual.
2. To assess the knowledge and practices of mothers in caring the children with ARI after receiving the education.

5.3 Variables:

Independent Variable:
In this study the independent variable is the teaching through self-instructional manual given to group III and I respectively.

Dependent Variable:
In this study dependent variable is the knowledge and practices of mothers in caring the child with acute respiratory infection.

The effect of the independent variable on dependent will be seen in the present study.
5.4 Operational Definition:

5.4.1 Development:

According to the Oxford dictionary it means to bring, to come into existence. In this study it means to prepare a self-instructional manual for mothers in caring the children with acute respiratory infection.

5.4.2 Self-instructional manual:

According to World Book encyclopedia Instructional means to give knowledge or to show how to do, to teach, to give directions. Manual: Is the book that helps its reader to understand or use something, or handbook. It is a set of simple written instructions. In the present study it is a set of simple written and pictorial self explanatory directions; regarding caring the children with ARI, which will be used by mothers of the children under the age of five years.

5.4.3 Acute respiratory infection:

It is an acute infection of any part of the respiratory tract and related structures including Para nasal sinuses, middle ear and the pleural cavity. The working group of W.H.O. (1985) has classified ARI broadly into two groups i.e. upper and lower respiratory infections. Upper include: Common cold, Pharyngitis and otitis media. Lower include: Epiglotitis, laryngitis, bronchitis, bronchiolitis and pneumonia. In the present study both upper and lower respiratory infections are included.

5.4.4 Knowledge:

According to the Oxford English dictionary knowledge means knowing, what is known of person, thing, facts, subject, and sum of what is known to mankind? In this study it refers to the mothers knowledge regarding acute respiratory infection, causes, predisposing factors, spread of infection, signs and symptoms, recognition of early danger signs, management during illness and prevention.

5.4.5 Practice:

According to Oxford English dictionary practice means habitual action of carrying on; repeated exercise to improve skill. In this study practice means how the mothers are carrying on with the care and prevention of ARI in under five children. The actions taken by the mothers in caring the child during illness, in recognition of danger.
signs, seeking health care facility and preventive measures. The verbal response related to practice is considered in the present study.

5.5 Assumptions:

1. Factual information given to mothers will reduce their anxiety and enable them to care for the child during illness, and seek medical help appropriately.

2. A Self-instructional manual is an effective and acceptable guide of information for providing adequate knowledge.

3. Education to the mothers through self-instructional manual will bring about changes in caring the children with ARI.

4. Mothers have cultural practices and beliefs regarding caring the young children, which can influence the care during the child’s illness.

5. Poor socio-economic conditions have a great effect on a mother’s knowledge and practice regarding caring the child with ARI.

6. Mothers play a vital role in minimizing the morbidity and mortality rates among under-five year children.

5.6 Hypotheses:

Stated null hypothesis are:

1. The Pre-test and Post-test scores of study groups and control groups are same and there is no significant difference.

2. There is no significant difference between the pre-test and post-test scores achieved by the mothers from the study group.

3. There is no significant difference between the pre-test and post-test scores achieved by the mothers from the control group.

4. There is no significant post-test scores difference between the two study groups.

5. There is no significant post-test scores difference between the control groups.

6. There is no significant difference between the post-test scores gained by the mother from study group and control group.
5.7 Scope of the study:

- The study will reveal the existing knowledge and practices of mothers regarding the acute respiratory infection among the under-five children.
- The finding of the study will provide useful clue to implement the practice of planned health education.
- Health personnel can focus their attention on the specific areas of lack of knowledge and unhealthy practices while imparting teaching.
- The instructional manual can be used as a teaching tool to educate the mothers through the nurses. It will be handy teaching material for the busy nurse in the clinical area.
- Education to mothers through Instructional manual will enable repeated reinforcement and will help them to understand the ARI problem better and how to take care of the child and how to prevent the illness and thus will help in reducing the under-five child mortality.
- The study will help in finding out the effect of the Instructional manual on mother’s knowledge regarding caring the children with acute respiratory infection.

5.8 Delimitation of the study:

1. Mothers of children below five years of Naigoan Maternity home, health post area (51,482 population) will be included in the study.
2. The mothers those who are willing to participate in the study will be included.
3. The mothers who are able to speak and understand Hindi, Marathi and English language.
4. The study will be conducted in urban area and will not include rural area.
5. The study will include mothers only and not the father and significant others, since mother is more close to the child during illness to care the child. The father may be difficult to contact during study because of job.
6. The practices will not be observed but through the questions the practices of mothers will be found out.
5.9 Research Design:

The research methodology used was descriptive survey for phase I study. A descriptive study describes and interprets what it is concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident and it is primarily concerned with the present. Thus this was the most suitable design for this present investigation. The evaluative approach by using Solomon four-group design the effectiveness of the SIM was done for Phase II study.

5.10 Setting of the study:

The study was conducted in two phases. 1st phase is to do the need assessment and based on the existing knowledge and practices of the mothers regarding caring the child with ARI the self-instructional manual will be developed. To find out the existing knowledge and practices the exploratory descriptive survey method is considered as better method to be included in the present study. This helps to explore the existing information.

The second phase is to find out the effect of self-instructional manual on knowledge of mothers in caring the child with ARI. The Solomon four group design is thought to be better research design. It permits the investigator to differentiate many effects. This research design is an extension of the control group design, and it is a refinement of the pre-test post-test control group design. This design helps to prevent the influence of pre test on the post-test scores.

The study was carried out in Naigoan health post area, which is located near Dadar area. The research was conducted by visiting the families. This area is majority occupied by Marathi speaking, middle class families. Majority of them work in police department. The Naigoan area is occupied by police quarters, police head quarter, ground, BDD old and New Chawls, Kohinoor mill chawl, cloth merchants and some hutment area.

The sample consisted in the phase I study was 100 mothers and 100 under-five year children. In phase II sixty mothers of under-five year children. In phase I the sample was selected on a stratified random basis to get the sample representation from all the area of Naigoan health post. For phase II sample was selected by simple random
technique. According to the objectives of the study the tools were constructed. The phase I tool comprised interview schedule to collect the mothers and under-five year child's data. Phase II tool comprised interview schedule and opinionnaire. The tool, were tested for content validity. The tool and intervention plan for the study were prepared after review of literature and suggestions from experts from nursing and medical fields.

The Phase I pilot study was undertaken on twenty mothers of under-five year children. The mothers and their under-five year child's data were collected. It was carried out from 25.5.03 to 30.5.03. The phase II pilot study was undertaken on ten mothers. It was carried out from 16.2.04 to 27.2.04. The pilot study helped to establish the feasibility and practicability of the tool and technique. The data collection of phase I study was done from 2nd June to 28th June 2003. The data collection of phase II study was from 28th Feb. to 6th April 2004. The data obtained from phase I and phase II study was analyzed, according to the objectives of the study and presented in the form of tables and graphs. To find out significant difference t test and ANOVA was used.

5.11 Findings of the study:

Findings of the socio economic & demographic profile:
1. Majority of the mothers belonged to the age group between twenty one to thirty years.
2. Maximum subjects belonged from Hindu community.
3. Moderately high, percent subjects had primary education, whereas few were illiterate.
4. Majority of the subjects are house- wives.
5. Per month family income was less than Rs.5000/- among majority of the subjects.
6. Maximum subjects lived in chawl system.
7. Majority of the subjects were from joint family system.
8. Maximum families had either one child or two children, adopting a small family norm.
9. At the time of survey, the children having ARI showed that majority of them were first child in the birth order.
Findings of the under five year child's data:

1. Maximum children belonged from Infant age group, moderately from the toddler group, and some belonged to pre-school age group.
2. Majority of the children were born in hospital. To some extent home delivery is prevalent in city also.
3. Maximum children's birth weight was below 2.5Kg. But this was not verified from the authentic record. It is assumed that mothers may just tell the round figure, whereas the fractional figures might be forgotten.
4. Maximum children were born full term.
5. Nine per cent of the children had history of illness, which is serious in nature. Out of these three per cent of them were admitted and treated in hospital whereas others were treated in out patient department.
6. Twenty two per cent of the children suffered from fever at the time of survey.
7. Maximum children had one or more than one episode of ARI in the past six months.

Findings of mothers existing knowledge regarding ARI & caring the child with ARI:(among under-five year children.)

Knowledge related to ARI:

1. Maximum mothers mentioned two or more illnesses that occur commonly during childhood.
2. Fifty per cent of the mothers do not know the respiratory disease conditions which commonly occur during childhood.
3. Eighty per cent of the mothers do not know the reason of respiratory infection.
4. Nearly fifty per cent of the mothers do not know the signs and symptoms of ARI. Those who know among them maximum mentioned cough and breathing problem.
5. The effect of negligence of cold & cough, moderately high, percent mothers gave a vague answer saying that the child will become sicker. Whereas less than fifteen per cent could mention the correct answer.
6. Majority of the mothers did not know about the danger signs of ARI.
7. Only one per cent of the subject knew the normal respiratory rate of an adult.

Section III Findings of Factors influencing ARI:
A) Caring the child in illness:
1. Majority of the mothers said, they will seek medical help immediately for respiratory ailments.
2. More than fifty per cent mothers do not know the medicine that is given to the child having ARI. Only five per cent of the mothers could mention antibiotic, antipyretics & decongestants
3. Fifty per cent of the mothers do not know the reason for putting oil in the ear and nose. Those who said know, the maximum feel the oil is put to keep the ear and nose clean, to loosen and soften dirt and to prevent dirt. Whereas the oil will help to stick the dirt in the ear and nose.
4. Cleaning the child's blocked nose, nearly fifty per cent said it should be cleaned with cloth. Less than ten per cent mentioned the correct practice i.e. Inhalation, salt-water drops, medicinal drops and one mother said to suck with mouth.
5. When child has cold and cough, child has to be kept warm. Fifty five per cent mothers said child should be put warm clothes.
6. Maximum mothers already use different home remedies for common cold and cough.
7. Moderately high, percent, of the mothers use cold compress and tepid sponging when the child has fever.

B) Feeding the child:
1. Majority of the mothers strongly agree that the child should be given breast feed within half an hour after birth.
2. Maximum mothers know the commencement of weaning.
3. Majority of the mothers know the feeding of one year, old child.
4. Majority of the mothers do not know the sources of vitamin ‘A’.
5. Only three per cent of the mothers feel there is no necessity to weigh the child regularly. Whereas maximum mothers feel the child should be weighed regularly.
6. Majority of the mothers feel cold food causes cold and cough.

C) Immunization of the child:
1. All the mothers feel child should be immunized.
2. Moderately high percent of the mothers feel immunization helps in the prevention of ARI among under-five year children.
3. Maximum mothers know the schedule of giving B.C.G. Fifty percent of them knew the schedule of DPT, whereas the schedule for measles is known by less than fifty percent of the mothers.

4. Majority of the mothers were of the opinion that the child should be immunized with measles vaccine.

Section IV:

Findings of existing practices related to caring the child with ARI:

A) Caring the child during illness:

1. Moderately high percent of the mothers give cold compress and tepid sponging when the child has fever. Fifty per cent of the mothers take the child to the doctor immediately without doing any thing.

2. Majority of the mothers use home remedies for common cold and cough.

3. All the mothers seek medical help when child becomes ill. Majority of them said they seek the medical help immediately for respiratory ailments.

4. Only thirty five per cent of them are able to identify that child is seriously ill.

5. Nearly all the mothers do not know to count the breathing of the under-five year child.

6. All the mothers give medicines regularly when the child is sick.

7. Majority of the mothers do not discontinue medicine on their own. When the symptoms disappear. But some discontinue, which is a harmful practice.

8. Majority of the mothers don’t give medication with the own decision, but some do give, which is not good practice.

9. More than fifty per cent do not give plenty of fluids during cough and cold.

10. Majority of the mothers put warm, cotton and thick clothes to the child when the child has cough and cold.

11. Moderately high percent of the mothers use cloth for cleaning the blocked nose of the child. Maximum mothers clean the blocked nose correctly.

12. Majority high percent of the mothers put oil in the ear and nose of the child. More often oil is put in the ear than in the nose.

B) Feeding the child:
1. Ninety seven per cent of the mothers said they give breastfeed to the child when child is sick. Whereas moderately high percent mothers said they breastfeed the child if they are sick.

2. Majority of the mothers give supplementary food to the child.

3. Forty five per cent of the mothers do not give adequate diet to the one-year child. They do not receive the necessary nutrients for the proper growth and development of the child.

4. Majority of the mothers give warm feed to the child when child has cold and cough.

C) Immunization of the child:

1. Maximum children were immunized completely.

2. Fifty per cent of the eligible children for Vitamin A dose were not given. None of them gave all five doses of vitamin A to the children who were eligible for five doses.

D) Other related factors influencing ARI:

1. Only two per cent mothers do not give daily bath to the child. Rest of the mothers gives daily bath to the child.

2. Majority of the mothers said they take the child regularly for follow up in the health center. But they are taking only for the purpose of immunizing or when the child is sick.

3. Majority of the mothers keep the window open while cooking. This is to prevent indoor pollution.

4. One mother who smokes. Eighteen per cent of the families in which someone from the family smokes.

5. Eighty per cent of the mothers had a habit of covering the mouth while coughing.

6. Majority of the mothers do not allow their child to play or sleep with one who has cold and cough. This is to prevent the transmission of the disease. Those who allow some said they are helpless because of the joint family less space and elders in the home whom they can't refuse to handover the child.

7. All the mothers feel that health center facility is convenient to them.
Section V Findings of the Information need assessment:

1. Moderately high percent of the mothers said they are confused, worried, have tension when child is sick and do not know what to do. This shows they need guidance.

2. Majority of the mothers desire the information to be given to them should include: caring the child during illness, care during fever, what and how medicine to be given. And the diet that is to be given to the child.

3. Maximum mothers said they receive the health information from the health personnel i.e. doctor, nurses, health worker and CHV.

4. Fifty per cent of the mothers said they seek health information from the health personnel.

Phase II Study:

Findings of the Socio Economic and Demographic Profile:

1. Majority of the mothers belonged to the age group between twenty one-thirty years.

2. Majority were Hindu families whereas moderately were Buddhist and few were Muslim.

3. Maximum have primary level education whereas moderately had secondary level and very few had graduate level education.

4. All the mothers were housewives except one mother who had a part time job in nursery.

5. Majority of the families had family income of Rs.3000 to 5000 per month.

6. Maximum lived in chawl system and few lived in flat and zopda.

7. Majority of the mothers used cooking gas stove and stove for cooking purpose. They have small house and no proper ventilation, therefore; chances of indoor air pollution are more.

8. Majority had joint family except group one where nuclear family trend was little more than joint family.

9. Majority of the family had two children, accepting the small family norm.

Findings of mother's knowledge regarding ARI:

1. Knowledge of mothers regarding respiratory diseases known to them showed that the "Don't know" response was from mild to moderate before intervention. Whereas maximum mothers were able to tell one to two diseases. After the intervention the
mothers from study group were able to tell more than three respiratory diseases, which occur among under-five year children.

2. The assessment of mother’s knowledge regarding causes of respiratory diseases showed that majority of them did not know before intervention. Whereas after intervention majority of them were able to tell three or four causes.

3. The other factors responsible for ARI were assessed and the results showed that more than fifty percent mothers from all the groups before intervention did not know. But after intervention the study group post-test scores showed there was a significant difference. Up to fifty percent mothers were able to tell one to two factors that are responsible for ARI among under-five year children.

4. The signs and symptoms of ARI known to mothers; seen different in the groups. In two groups very few percent said they don’t know whereas the pre-test, post-test control group, moderately high said they don’t know. Whereas the post-test scores showed mild difference in the control group, which may be influenced because of pre-test. The study group post-test scores were maximum. They were able to tell more than three to four signs and symptoms.

5. Maximum mothers did not know the danger signs of pneumonia before the intervention. Whereas after intervention the study group were able to tell more than three danger signs. The pre-test did not have any effect in the post-test scores in the control group.

6. More than fifty percent mothers knew about breathing. After the intervention the study group subjects, all were able to tell what is breathing.

7. None of the mothers knew what is fast breathing in under-five year child. Whereas the SIM education showed significant difference in the study group. The post-test scores in the study group showed maximum increase than the pre-test scores.

8. None of the mothers knew chest in drawing which is the sign, mother should look into child to seek early medical help. The intervention did bring about a significant difference. All the mothers from study group were able to tell about chest in-drawing after the intervention.
9. Mother’s knowledge regarding stridor among under-five year child showed that none of the subjects knew about stridor. After the intervention majority of the mothers knew about stridor.

10. Majority of the mothers from both, study group and control group said that whistling sound is not a good sign in the under-five year child.

Findings the mother’s knowledge regarding factors influencing ARI:

A) Caring the child during illness:

1. Seeking medical help promptly is an important factor in the management of the child with ARI. Majority of the mothers knew one to two signs to seek medical help before intervention, whereas after intervention majority were able to tell three to four signs and some even told five to six signs.

2. The remedial measures taken in the management of child suffering from ARI found that maximum mothers did not know before intervention, whereas after intervention majority of them were able to tell more than two remedial measures.

3. The cleaning of blocked nose was not known by majority of the mothers. After intervention all the mothers from study group were able to tell the cleaning of blocked nose.

4. The cloths to be put to the child having ARI found majority did not know, but second control group subjects new moderately. After intervention in the study group majority of the subjects were able to tell the clothes to put to the child having ARI.

5. Before intervention one to two home remedies used for common cold and cough, were known to mothers. After intervention the subjects were able to tell three to four home remedial measures from the study group. None of the groups were able to tell more than four home remedial measures.

6. Recognizing fever in the child was not known by the majority of the mothers before intervention, whereas maximum mothers were able to tell after intervention from the study group.

7. Caring the child with fever was assessed and it was found that one measure was known by more than fifty percent of the subjects before intervention. Whereas after intervention more than two measures were told by the study group subjects.
moderately. The intervention did not have much effect in bringing the significant
difference in the knowledge regarding caring the child with fever.

B. Feeding the child:
1. Initiation of breast-feeding after birth; was not known to some mothers before
intervention. After the intervention all the mothers new from the study group.
Whereas there was not difference in the control group.
2. Before intervention majority of the subjects did not know the duration of exclusive
breast-feeding. Whereas after intervention maximum mothers were knowing from the
study group.
3. Moderate to majority of the mothers did not know the commencement of weaning.
The study group showed that nearly all the mothers knew the commencement of
weaning after the intervention.
4. Maximum mothers did not the source of vitamin ‘A’ before the intervention. After the
intervention majority were able to tell more than one source of vitamin ‘A’.

C. Immunization of the child:
1. Role of immunization in prevention of ARI was found that the study group subjects,
majority of them did not know but, from control group subjects, less than fifty percent
of them did not know. After intervention all the mothers knew the role of
immunization in prevention of ARI among the study group.
2. Majority of the mothers knew regarding BCG immunization before intervention. The
knowledge regarding DPT and measles immunization was up to fifty percent. After
intervention the knowledge regarding DPT and measles was improved.

D. Caring ear and nose of the child:
1. Mother’s opinion regarding putting oil in the ear and nose mild to moderately high
percent of the subjects feel that oil should be put in to ear and nose. Comparatively
putting oil into the ear is more than the nose. More than fifty percent said the oil
should not be put in the ear and nose.

Section III findings of mothers’ opinion regarding SIM:
1. All the mothers said the SIM was easy to understand. The content clarity is good.
2. All the mothers said the content of SIM is adequate.
3. All the mothers said the pictures were suitable to the content they are attractive. The concept becomes clear by seeing the picture.

4. All the mothers felt the SIM is useful to all the mothers who have under-five year child.

5. More than fifty percent mothers said SIM is very good.

6. Few mothers felt along with ARI another common topics information also should be given to them.

Analysis of the effectiveness of SIM:

The null hypothesis asserts that the post-test scores of four groups does not differ. To test this hypothesis among means variance is divided by the within groups variance and the resulting variance ratio is compared with the $F$ values in Table $F$. The $F$ is 130.04 and the df 3 and 56 an $F$ of 2.758 is significant at the .05 level and an $F$ of 4.126 is significant at the .01 level. We reject the null hypothesis, therefore, and concluded that the means of post-test scores of four groups do in fact differ. $F$ furnishes a comprehensive or overall test of the significance of the differences among means. A significant $F$ does not tell us which means differ significantly, but that at least one is reliable different from some others. To test the separate differences among the mean scores can be done by the $t$ test.

In testing mean differences by the $t$ test, the population SD of 2.36 is used instead of the SD's calculated from the separate columns. The four means yielded six differences. Four differences are significant at .01 level and two differences are non significant.

The largest difference is between Gr. II (Control) and Gr. III (Study) = 12.77. Gr. III (Study) and Gr. IV (Control) = 12.29. Gr. I (Study) and Gr. II (Control) = 11.7. Gr. I (Study) and Gr. IV (Control) = 11.22.

The smallest difference is between Gr. II (Control) and Gr. IV (Control) = 0.48. Gr. I (Study) and Gr. III (Study) = 1.07. The difference between study group and control group shows that the intervention of giving SIM to the mothers has improved the knowledge scores of the mothers.
2. Knowledge scores difference of pre-test and post-test in study group:

To assess the pre test and post test knowledge scores difference the $t$ test was used. The calculated $t$ is 17.3, which is greater than the table value. Table D value df of 14 at .05 level is 2.14 and at .01 level is 2.98. The computed value is greater than the table value hence there is significant difference. Thus $t$ is significant at 0.05 level. Therefore null hypothesis is rejected.

The mothers from this group received the SIM after the pre-test. The SIM was explained to the mothers and was asked to go through and make use of this SIM in caring their children. The post-test knowledge scores difference is due to the SIM. Many studies have been documented that the intervention brings about change in the knowledge. Therefore educating mothers will improve the mothers knowledge regarding caring the child with ARI.
5.12 Conclusion:

Child dies from pneumonia many deaths could be prevented. The key to their prevention is education of mothers, primary health care workers and training of health personnel and doctors. The C.S.S.M programme (1992) led the training of primary health workers, health personnel and doctors. But the mother's education and regular reinforcement is neglected.

Mothers play a key role in the management of the child with ARI. Mother has to understand the appropriate decision-making, recognize the mild, moderate and severe ARI. She has to develop skill in observing the chest in-drawing, respiratory rate and other danger signs. The ignorance of the mothers is an important factor, which affect the health of the children. Therefore the doctor, nurse, health care workers needs to be able to provide accurate information about ARI to the mothers and to help them to cope effectively with the problem of ARI among the children.

Health for all will be achieved by removing misconceptions, ignorance and unhealthy practices through education. Before beginning any health education the existing knowledge and practice need to be assessed. We create awareness of health needs and problems, which leads to motivation. Motivation helps the individual to take interest, evaluate the information that is received. Finally, individual decides to adopt and is convicted to put the information into action. After assessing the existing knowledge & practices regarding ARI the investigator found that the mothers were lacking in the knowledge and practice. Hence the SIM was developed and was given to the study group. The significant knowledge difference was seen in the study group. SIM was an effective teaching tool in improving the mothers knowledge regarding caring the children with acute respiratory infection. They felt the SIM is useful for the mothers of under five year children. The overall opinion of the SIM was rated by majority of the mothers as very good.

The simple and essential massage about ARI and care during illness needs to be given to prevent four million deaths that are believed to occur annually in children in the first five years of life in developing countries. Keeping in view mothers education is an important factor, the investigator felt the need to develop self-instructional manual for mothers in caring the child with ARI.
5.13 Nursing implications:

The findings of the study are valid and relevant in the field of nursing. The implication of this study could be discussed under four board areas, namely nursing service, nursing education, nursing administration and nursing research.

5.13.1 Nursing service:

Nurses play a vital role in delivery of the health services in urban and rural areas. They are in the frontline in the implementation of C.S.S.M. programme, which includes the management of ARI among under-five year children. The female health worker at sub-center who dose early detection of the case of pneumonia and treats the mild cases and URTI cases and refers the sever cases immediately. The nurse at PHC takes care of the ARI cases with the help of doctor at PHC. The nurses at rural hospitals manage the pneumonia cases under the guidance of paediatrician. The nurses from sub-district and district hospital take care of sever pneumonia and URTI cases admitted. The super specialty and children hospitals nurses take care of seriously ill ARI cases.

The nurses in OPD and health workers in villages they educate the mothers about the prevention of ARI. They immunize the child with BCG, DPT and Measles vaccine. They insist about breast-feeding, weaning, home remedy, identifying danger signs of pneumonia etc.

Nurses can educate the mothers in well baby clinic regarding child nutrition, prevention of ARI, regular follow-up of the child, immunization etc. in antenatal OPD about mothers diet, prevention of LBW baby, importance of early initiation of breast-feeding, exclusive breast-feeding, keeping baby warm etc. Nurses are very busy in I.C.U., wards, OPD hence they can make use of self-instructional manual to educate the mothers. Thus the nurse can plays role in prevention and caring the child with ARI.

5.13.2 Nursing education:

Nursing education prepares the nurses through basic nursing course for effective delivery of nursing services to the patient either in the hospital or in the community setup. Hence education plays an important role in imparting knowledge, providing learning experiences, placement in the clinical area to develop skills and attitude among the nurses to work as professional nurse.
After completion of basic nursing education an additional pediatric short term course is also provided so as to make the nurse more knowledgeable and skillful in caring the children. The nurse educator can make the nursing students and the health personnel aware about the magnitude of the problem of ARI, and the factors influencing ARI. They can play a key role in motivating the nursing personnel in prevention of ARI. The nurse educators through in-service education can educate the nurses regarding caring the children with ARJ. The nurse educators can help the students to develop different teaching strategies to educate the mothers about ARI.

5.13.3 Nursing administration:

Health education can save many lives. Educating mothers is one of the most cost effective inventions. A large number of diseases could be prevented with little or no medical intervention if the mothers were adequately informed about them and if they were encouraged to take the necessary precaution in time. The educational approach is a major means today for achieving changes in health practices. The results though slow, are enduring and sufficient time should be allowed to have the desired change to be brought about. Therefore the nurse administrator should invest more budget in preparing informational booklet, instructional manual, leaflet so as to educate the mothers. The separate room in the ward and OPD for educating the mothers with film show, different models, demonstration, charts, posters, white board, can be used. All these efforts are for “Prevention is better than cure.”

5.13.4 Nursing Research:

To increase the knowledge base of the nursing discipline and to provide more effective, efficient and compassionate care, nursing research should be undertaken. Research in nursing is increasing because nurses are directly accountable for their practice. Experimental and quasi-experimental studies can give the objective evidence for practice. Exploratory descriptive studies will help in exploring the existing facts based on which nurse can plan, modify the care, and adopt teaching strategy.

Research is urgently needed to develop new and improved methods for the prevention and treatment of ARI. The results of the present study have opened up avenue for further studies. The specific areas for research are recommended under the heading of recommendation.
5.13.5 Preventive Medicine:

In any community, mothers and children constitute a priority group. In sheer numbers, they comprise approximately seventy percent of the population of the developing countries. In India, women of the childbearing (15-44 years) constitute nineteen percent and children under fifteen years of age about forty per cent of the total population. Together they constitute nearly fifty nine per cent of the total population. But virtue of their numbers, mothers and children are; the major consumers of health services, have whatever form.

Mothers and children not only constitute a large group, but they are also a “vulnerable” or special-risk group. The risk is connected with childbearing in the case of women; and growth, development and survival in the case of infants and children.

5. 14 Suggestions:

1. Mothers should be given knowledge regarding the common respiratory conditions that occur during childhood.
2. Mothers should be told about the causes of respiratory diseases.
3. Mothers should be told about the factors that influence ARI among under five year children.
4. Majority of the mothers know few symptoms of ARI but they must be taught how to recognize the danger signs of pneumonia.
5. Mothers should be taught to count breathing in the well baby clinic or when they bring their child for immunization.
6. Mothers should be shown the video film to show fast breathing, chest in-drawing.
7. Mothers should be educated regarding wheeze because majority of the mothers feel whistling sound during breathing is normal.
8. Mothers should be made to understand when their child needs medical help and when only requires home care. Mothers should be explained about remedial measures of ARI.
9. Mothers should be taught to take temperature with thermometer so that she can check temperature and will know whether child has fever or no.
10. Mothers should be shown the demonstration of cleaning of blocked nose.
11. Mothers should be taught in the mother’s craft clinic regarding the cloths to be put to
the newborn infant and when child has ARI during childhood.

12. Early initiation i.e. within half an hour after birth, and exclusive breast-feeding for
four to six months must be stressed during Antenatal check up.

13. Though the mothers know the commencement of weaning but the weaning should be
displayed in the health post so that when they come for immunization they can see it.
They should be shown the demonstrations of some of the weaning foods so that they
can practice.

14. Mothers should be given education about importance of vitamin A and the various
sources of vitamin A.

15. Mothers immunize the child but they should be told why the child is immunized. The
role of immunization in prevention of ARI should be explained to them.

16. Mothers should be explained the harmful effects of putting oil in the ear and nose of
the child. The posters can be displayed in the Antenatal clinic and immunization
clinic.

17. Mothers appreciate the written material, instructions, hence they should be provided
leaflet, booklet, module, instruction manual to the mothers regarding child care,
common practices, child nutrition, immunization etc.

18. Regular health education programme should be conducted in the antenatal clinic and
paediatric OPD of PPC center.

19. A well baby clinic or under-five clinic must be organized and regularity of that clinic
should seen by the municipal authority in every maternity home.

5.15 Recommendations:

1. A similar study can be conducted to assess attitude and practices of caregivers on
exposing them to self-instructional manual.

2. A follow up study can be conducted to evaluate effectiveness of the instructional
manual in retention of knowledge.

3. A similar study may be planned to develop an educational intervention for non-
literate caregivers.

4. A comparative study can be taken in urban and rural area to find out the effectiveness
of the self-instructional manual.
5. An evaluative study can be conducted to assess the services rendered by various health personnel regarding ARI.

6. The study should be done to assess the relationship of variables and the knowledge and practices of mothers.

7. Similar study should be done on a larger scale.

8. A comparative study can be undertaken to see the difference between urban and rural slum mother's knowledge and practices in relation to ARI.

9. Some study can be done as a hospital based study.

10. Various education methods can be used to create awareness among mothers regarding ARI and can be tested for its effectiveness.

11. A comparative study could be undertaken between municipal, Government and private hospitals to see if there is any significant difference in the information need and information received by the mothers.

12. A longitudinal study can be done to see the impact of teaching through booklet, module, SIM in knowledge and practices regarding caring the child with ARI.

13. Effectiveness of teaching and ARI episode: A prospective follow up study from birth to five year can be done.

5.16 Personal Experience:

The mothers were full of gratitude that the information and education they needed would be provided in the form of an instructional manual. They were very co-operative and interested in the study. They said they would always be able to refer the SIM.

The study posed a lot of challenge and provided long experiences. At the end the study, the investigator felt a sense of achievement in furthering her personal and professional experiences and also in helping the mothers in caring the children with ARI.

The study brought into focus the need for information for the mothers in caring children with ARI. The role of the health personnel in imparting education to the mothers in caring their children is very vital.

Most of them requested a copy of Self Instructional Manual for reference to their friends and relatives.
DATA COLLECTION WAS A CHALLENGING TASK
LONG STANDING AND CLIMBING 3 STORY BUILDING WAS A CHALLENGE

PASSING THROUGH A NARROW PASSAGE IN RAINY SEASON WAS HARD TASK