# "A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PNEUMONIA & BRONCHITIS AMONG MOTHERS OF UNDER FIVE CHILDREN IN SELECTED RURAL AREA OF DISTRICT, ROHTAS."

<sup>1</sup>Shivam Raj, <sup>2</sup>Shivam Kumar, <sup>3</sup>Shivani Shubham, <sup>4</sup>Dr. Shaveta Sharma

B.Sc. (N) 4<sup>th</sup> year student, <sup>4</sup>Vice Principal, Narayan Nursing College Gopal Narayan Singh University Jamuhar, Rohtas, Bihar.

Abstract-

**Background of the study** 

Respiratory tract infections are infectious disease involving the respiratory tract. An infection of this type usually is further classified as an upper respiratory tract infection (URI or URTI) or a lower respiratory tract infection (LRI or LRTI). Lower respiratory infections, such as pneumonia, tend to be far more severe than upper respiratory infections, such as the common cold. Except during the neonatal period, ARIs are the most common causes of both illness and mortality in children under five, who average three to six episodes of ARIs annually regardless of where they live or what their economic situation is . The common LRIs in children are pneumonia bronchiolitis and bronchitis.

Method: Present study the researcher adopted a pre - experimental (one group pre-test post – research design) research design; in the present study the independent variable refers to the structured teaching program regarding pneumonia and bronchitis among mothers of under five children, in this present study the dependent variable refers to the knowledge of mother of under five children; the present study was conducted in selected areas of Rohtas; in the present study, the target population consisted of all Mothers of under five children of Rohtas city. In present study the samples were selected through non-probability convenient sampling technique. A structured knowledge questionnaire was developed by the investigator to assess the level of knowledge of Mothers of under five children. The final tool consisted of structured knowledge questionnaire which consists of two parts: Demographic section, Self-Structured knowledge questionnaire. The STP was developed according to the objectives prepared. The investigator prepared the overall plan of STP and A.V aids such as charts and blackboard. The reliability was calculated using split half method. The reliability (r = 0.812). Mean and standard deviation of pre-test and post-test knowledge score -'t' test to determine the significance of difference in before and after administration of structured teaching programme in knowledge score.

Results: Most of the samples were in 21-30 years category at 43%; most of the samples were in 0-1 year category at 44.3%; most of the samples were in unskilled work category at 28.6%; most of the samples were in joint category at 30%; most of the samples were in Rs.30000-40000 category at 42.9%; most of the samples were in family & relatives category at 44%; in the pre test knowledge majority of the sample (n=56), 80% were in the average level; in the post test knowledge after STP, majority of the sample (n=49), 70% were in the average level; it was found that there was no association between the levels of knowledge regarding pneumonia and bronchitis with their socio demographic variables. Conclusion: In the pre test knowledge majority of the sample (n=56), 80% were in the average level; inadequate level (n=11), 15.7%; and adequate level (n=3), 4.3%. In the post test knowledge after STP, majority of the sample (n=49), 70% were in the average level; adequate level (n=13), 18.6%, and inadequate level (n=8), 11.4%. The study showed that STP had significant increase in the knowledge regarding pneumonia and bronchitis as the percentage of above average category in pre test was 4.3% which increased to 18.6% in post test after providing STP. Pertaining to association between socio demographic variables and knowledge regarding pneumonia and bronchitis no relation was found using Chi-squared test as all the values were more than 0.005.

Keyboards: Assess, Knowledge, Effectiveness, Structured Teaching Programme, Pneumonia, Bronchitis.

### INTRODUCTION

The present conditions are invasion of the lower respiratory tract, below the larynx by pathogens either by inhalation, aspiration, respiratory epithelium invasion, or hematogenous spread. There are barriers to infection that include anatomical structures (nasal hairs, turbinates, epiglottis, cilia), and humoral and cellular immunity. Once these barriers are breached, infection, either by fomite/droplet spread (mostly viruses) or nasopharyngeal colonization (mostly bacterial), results in inflammation and injury or

death of surrounding epithelium and alveoli. This is ultimately accompanied by a migration of inflammatory cells to the site of infection, causing an exudative process, which in turn impairs oxygenation $^{01}$ .

Bronchitis is an inflammation of the large breathing tubes (bronchi) in the lungs. The illness can be short-term (acute) or long-term (chronic). Acute bronchitis means that the symptoms often develop quickly and don't last long. Acute bronchitis is most often caused by a viral infection. It may also be caused by bacteria or things such as dust, allergens, strong fumes, or tobacco smoke. In children, the most common cause of acute bronchitis is a virus. The illness may develop after a cold or other viral infection in the nose, mouth, or throat (upper respiratory tract). Such illnesses can spread easily from direct contact with a person who is sick. Children who have a higher chance of developing acute bronchitis are those who have chronic sinusitis, allergies, asthma, enlarged tonsils and adenoids and exposure to secondhand smoke<sup>02</sup>.

Pneumonia remains the leading cause of death in children outside the neonatal period, despite advances in prevention and management. Over the last 20 years, there has been a substantial decrease in the incidence of childhood pneumonia and pneumonia-associated mortality. New conjugate vaccines against Haemophilus influenzae type b and *Streptococcus pneumoniae* have contributed to decreases in radiologic, clinical and complicated pneumonia cases and have reduced hospitalization and mortality. The importance of co-infections with multiple pathogens and the predominance of viral-associated disease are emerging<sup>03</sup>.

### **OBJECTIVES**

- To assess the pre test knowledge score regarding pneumonia and bronchitis among mothers of under of five children.
- To find out the effectiveness of STP regarding level of knowledge among mothers of under five children regarding pneumonia and bronchitis
- To compare the pre test and post test score.
- To find out the association between pre test knowledge score with their selected demographic variable.

### MEHODOLOGY

In this study evaluatory research was used to assess the effectiveness of structured teaching programme on knowledge regarding pneumonia and bronchitis among mothers of under five children. This study includes quantitative research design that is pre experimental research design. This approach is considered by the investigator as the most suitable for this study. **Research Design:** Pre — Experimental Research Design. **Target Population:** - All the mothers of under five children study in the selected areas of Rohtas. **Accessible Population:** - All the mothers residing in the selected areas such as Jamuhar, Talab areas of Rohtas. **Sampling Technique:** - Non- Probability Sampling Technique. **Sample Size:** - 70 Mothers of under five children. **Development and Description of the Tool:** A structured knowledge questionnaire was developed by the investigator to assess the level of knowledge of Mothers of under five children. The final tool consisted of structured knowledge questionnaire which consists of two parts:

- a) Demographic section: It consists of items for obtaining general information about the age, age of child, educational status, occupational status, type of residential area, type of family, annual income of the family and previous knowledge.
- b) Self-Structured knowledge questionnaire.

### PRE-TEST

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7	b	a	b	c	b	c	a	b	1	1	0	1	0	0	1	1	0	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	0	1	15
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5 7	a	a	d	b	b	d	c	a	0	0	0	1	0	1	0	1	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	12
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6 7	b	a	d	a	b	d	b	a	1	1	0	1	0	1	1	1	1	1	0	1	1	1	1	0	1	0	1	0	1	0	1	0	1	1	18
6 8	b	a	d	a	b	a	c	a	0	1	0	0	0	1	1	1	1	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0	0	1	13
6	b	a	d	d	b	a	b	a	1	1	0	0	0	1	1	1	1	0	0	0	1	0	1	0	1	1	1	0	1	1	1	0	0	0	14
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## POST-TEST

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2	a	b	c	b	b	b	a	c	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	5
3	a	с	d	b	b	a	b	a	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	1	8
4	b	c	b	a	b	b	a	d	0	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	1	0	7
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A		d	b	b	b	b	a	c	b	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
S		a	b	d	c	b	b	d	С	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	0	1	1	1	1	1	15
A		b	a	c	d	b	b	a	d	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	0	13
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R		a	d	b	b	b	a	b	d	0	1	0	1	0	0	0	0	0	0	1	1	1	1	0	0	1	0	1	0	1	0	0	0	0	1	10
S		b	d	d	c	b	c	d	c	0	1	0	1	0	0	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0	15
0		a	c	c	d	b	b	c	d	0	1	1	0	1	0	1	0	0	1	1	1	1	1	0	1	1	0	0	1	1	0	0	1	0	1	15
1		b	c	d	c	b	c	d	b	0	0	1	1	1	0	1	0	0	1	1	1	0	1	0	1	1	0	0	1	1	1	0	1	0	1	25
2		a	c	b	c	b	a	b	c	0	1	1	1	0	0	1	0	0	1	0	1	1	1	1	1	1	0	0	1	1	1	0	1	0		26
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2     a     c     b     d     b     a     d     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     1     1     1     0     0     0     1     1     1     0     0     1     1     1     0     0     0     0     0     0     0     0     0     0     0     0     0		b	c	c	d	b	c	a	b	0	1	1	1	1	0	1	0	0	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	19
C	2	a	c	b	d	b	b	a	d	0	1	0	0	1	0	1	0	0	1	0	1	0	1	1	1	1	0	0	1	1	0	1	1	1	0	14
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2     d     b     d     c     b     c     d     b     1     1     1     1     0     0     1     0     1     0     0     1     1     0     0     1     0     0     1     0     0     1     0     0     1     0     0     1     0	2 7	a	c	c	b	b	c	b	c	1	0	1	1	1	1	0	1	0	1	0	1	1	0	0	0	0	0	0	1	1	0	1	1	0	0	13
2     d     b     d     c     b     c     d     b     1     1     1     1     0     0     1     0     1     0     0     1     1     0     0     1     0     0     1     0     0     1     0     0     1     0     0     1     0	2 8	b	b	c	d	b	b	c	a	1	0	1	1	1	1	0	0	0	1	0	1	1	1	1	0	1	0	0	1	1	1	1	0	1	1	17
3	2 9	d	b	d	c	b	с	d	b	1	1	1	1	0	0	0	1	0	1	0	0	1	1	0	0	1	0	1	0	1	1	1	1	1	1	16
3     b     a     d     c     b     a     b     b     1     1     0     1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0     0     0     1     0     0     0     0     1     0	3	c	b	c	b	b	b	c	a	1	1	1	1	0	1	0	1	1	1	1	0	1	1	0	0	0	0	0	1	0	1	1	1	1	1	17
3   c   b   c   d   b   c   c   0   1   0   0   0   0   1   1   0   0   0   0   0   0   1   0	3	b	a	d	c	b	a	b	b	1	1	0	1	1	1	1	1	1	1	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	19
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7	3 7	a	b	d	c	b	b	c	b	1	1	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	1	0	1	0	1	1	1	1	1	15

3 8	c	b	d	b	b	c	b	c	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	1	1	1	1	16
3	b	a	c	a	b	b	d	b	1	0	0	1	1	0	1	0	0	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	0	1	17
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4 2	a	a	d	a	b	d	d	a	1	1	1	1	0	1	0	0	1	1	0	1	1	0	0	1	1	1	0	0	1	0	1	1	1	0	16
4 3	a	a	d	a	b	d	d	a	0	1	1	1	1	1	0	0	1	0	0	1	1	0	0	1	1	1	0	1	0	0	1	1	1	0	15
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4 8	c	a	c	b	b	b	c	a	1	1	1	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	1	0	0	0	0	1	1	1	13
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5 0	с	a	c	a	b	b	b	a	1	1	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1	9
5 1	a	a	d	c	b	a	c	d	1	1	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	8
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5 4	b	a	b	c	b	c	b	d	1	1	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	0	1	15
5 5	b	b	b	c	b	d	b	d	1	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	1	11
5 6	b	b	d	a	b	d	c	a	1	0	1	1	1	0	0	0	0	1	0	1	0	0	0	0	0	1	1	1	1	0	0	1	1	0	12
5 7	a	a	d	b	b	d	c	a	0	1	1	1	0	1	0	1	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0	15
5 8	a	b	a	b	b	d	c	a	0	1	1	1	0	0	0	0	0	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	15
5 9	a	c	a	a	b	d	c	a	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	19
6 0	b	a	a	a	b	d	c	a	0	1	1	1	1	0	0	0	0	1	1	0	0	1	1	0	0	1	1	1	1	1	0	1	0	1	15
6 1	b	b	a	b	b	d	c	a	0	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	17
6 2	b	b	a	b	b	d	c	b	0	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	20
6	c	a	d	b	b	d	c	b	1	1	1	0	0	1	0	1	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	1	0	0	15
6 4	a	a	d	d	b	a	c	a	0	1	1	0	0	1	1	1	0	1	0	1	0	1	1	1	0	0	0	0	1	0	1	1	1	1	15
6 5	b	c	d	a	b	d	b	a	1	0	1	0	0	1	1	1	1	1	0	0	1	0	1	1	0	1	1	0	1	1	1	1	1	0	17
6 6	a	c	d	a	b	d	b	a	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	0	0	1	1	0	0	0	0	1	1	1	17
6 7	b	a	d	a	b	d	b	a	1	1	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0	1	0	1	0	1	1	19
6 8	b	a	d	a	b	a	c	a	0	1	1	0	0	1	1	1	1	0	0	1	1	0	1	1	1	0	1	0	1	0	1	0	0	1	15

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7	b	a	d	d	b	d	c	a	0	1	0	1	0	0	1	1	0	0	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	0	16

### **RESULTS:**

Table.1: frequency and percentage distribution information of mothers of under 5 children with their Pearson's chi square values **N=70** 

Dem	ographic information		Frequency	Percentage	df	$(x^2)$
		Below 20 years	25	35.7		
1	A co of mother	21 - 30 years	30	42.9	6	0.126
1	Age of mother	31 - 40 years	13	18.6	О	0.120
		Above 40 years	2	2.9		
		0 -1 year	31	44.3		
2	A co of Child/Children	1 -2 year	21	30.0	6	0.393
2	Age of Child/Children	3-4 year	14	20.0	О	0.393
		4 -5 year	04	5.7		
		Degree holder	6	8.6		
3	Educational Status	High School	12	17.1	6	0.121
3	Educational Status	Senior Secondary	18	25.7	О	0.121
		Illiterate	34	48.6		
		Skilled work	19	27.1		
4	Occupation	Semi –skilled work	19	27.1	6	0.304
4	Occupation	Unskilled work	20	28.6	О	0.304
		Housewife	12	17.6		
5	Type of residential area	Urban area	0	0		
3	Type of residential area	Rural area	70	100		
		Nuclear	19	27.1		
6	Types of family	Joint	21	30.0	6	0.034
O	Types of family	Extended	20	28.6		0.034
		Others	10	14.3		
		Rs.<20000	8	11.4		
7	Annual income of the	Rs.<20000 -30000	9	27.1	6	0.451
/	family	Rs.<30000 -40000	30	42.9		0.431
		Rs.<40000 &above	13	18.6		
	Previous Knowledge	Family & Relatives	31	44.3		
	regarding Pneumonia	Friends	13	18.6		
8	&Bronchitis yes or no.	Books & Magazines	13	18.6	6	0.188
	If yes, source of information through:-	Health care Professionals	13	18.6		

### **DISCUSSION:**

Most of the samples were in 21-30 years category at 43%, next at 36% in below 20 years category, at 18% in 31-40 years category and at last at 3% in above 40 years category. Most of the samples were in 0-1 year category at 44.3%, next at 30% in below 1-2 years category, at 20% in 3-4 years category and at last at 5.7% in 4-5 years category. Most of the samples were Illiterate category at 49%, next at 26% in below Senior Secondary category, at 17% in High School category and at last at 8% in degree holder category. Most of the samples were in unskilled work category at 28.6%, next at 27.1% in Skilled work category, at 27.1% in semi-skilled work category and at last at 17.1% in housewife category. Most of the samples were in rural area category at 100%, next at 0% in urban area category. Most of the samples were in joint category at 30%, next at 29% in extended family category, at 27% in Nuclear family category and at last at 14% in others category. Most of the samples were in Rs.30000-40000 category at 42.9%, next at 27.1% in Rs.20000-30000 category, at 18.6% in Rs.40000 &above category and at last at 11.4% in Rs. <20000 category. Most of the samples were in family & relatives category at 44%, next at 19% in Books& Magazines category, at 19% in Health care professional category and at last at 18% in friend's category. In the pre test knowledge majority of the sample (n=56), 80% were in the average level; inadequate level (n=11), 15.7%; and adequate level (n=3), 4.3%. In the post test knowledge after STP, majority of the sample (n=49), 70% were in the average level; adequate level (n=13), 18.6%, and inadequate level (n=8), 11.4%. The study showed that STP had significant increase in the knowledge regarding pneumonia and bronchitis as the percentage of above average category in pre test was 4.3% which increased to 18.6% in post test after providing STP. Association between the

levels of knowledge with their selected demographic variable shows that, age of mother (0.126, 95%, df=6); age of children (0.393, 95%, df=6); Educational status (0.121, 95%, df=6); Occupation (0.304, 95%, df=6); Types of family (0.034, 95%, df=6); Annual income of the family (0.451, 95%, df=6); Previous knowledge regarding Pneumonia & bronchitis, source of knowledge (0.188, 95%, df=6). Hence, it was found that there was no association between the levels of knowledge regarding pneumonia and bronchitis with their socio demographic variables. In this study it shows that, P value and statistical significance: the two-tailed P value is less than 0.0001, by conventional criteria, this difference is considered to be extremely statistically significant. Confidence interval: the mean of Pre test minus Post test equals -2.14, 95% confidence interval of this difference: From -2.86 to -1.43. Intermediate values used in calculations: t=5.9782, t=5.

### **CONCLUSION: -**

In the pre test knowledge majority of the sample (n=56), 80% were in the average level; inadequate level (n=11), 15.7%; and adequate level (n=3), 4.3%. In the post test knowledge after structured teaching programme, majority of the sample (n=49), 70% were in the average level; adequate level (n=13), 18.6%, and inadequate level (n=8), 11.4%. The study showed that STP had significant increase in the knowledge regarding pneumonia and bronchitis as the percentage of above average category in pre test was 4.3% which increased to 18.6% in post test after providing STP. Pertaining to association between socio demographic variables and knowledge regarding pneumonia and bronchitis no relation was found using Chi-squared test as all the values were more than 0.005. In this study, the researcher focuses on strengthening the skills and clinical expertise of the current and future nurses to tackle the serious available problem, i.e., pneumonia and bronchitis among under five children and its prevention to provide the optimal care to the client and patients. The nurses must focus on providing health care based on patient's preferences such as, needs, culture, language, society, and race, to provide the optimum and holistic care needed. Through this study, Nurse Administrator should take interest in motivating the nursing faculty, staffs, students and other health care worker to improve their professional knowledge, skill, related to knowledge of pneumonia and bronchitis among under five children and its prevention to provide the optimal care to the client and patients. Questionnaire and explored level of knowledge can be used by the future nursing faculty and colleges to impart knowledge and skills to the future nursing officers to impart skills and treatment to the people of Bihar as the state has depicted a high level of children suffering from the ailment. The STP relating to prevention of pneumonia and bronchitis in the state can consciously and systematically improve the incidence to the problem associated.

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