Kanaka Lakshmi R, Latha P and Dr. Indira Arumugam

Abstract

Background: Respiratory infections account for the majority of acute illness in children. Infections are
influenced by the age of the child, the season, living conditions, and preexisting medical problem. Infections
often spread from one structure to another because of the contiguous nature of the mucous
membrane lining the entire tract.

Aim: The aim of the study was to assess the high risk of diabetic foot among diabetic patients.

Objectives:
1. To assess the prevalence respiratory tract infections among under five children.
2. To identify the risk factors of respiratory tract infections among under five children.
3. To find out association between the prevalence respiratory infections and the selected demographic variables.

Methodology: 100 under five children from rural area, Chemudugunta at Nellore were selected by
using convenient sampling method.

Results: Regarding the among 100 samples 50%(50) have no respiratory tract infection, 1%(1) have
mild respiratory tract infection, 15%(15) have moderate respiratory tract infection and 34%(34) have
severe respiratory tract infection.

Keywords: Prevalence, respiratory tract infections, under-five children

Introduction

Respiratory infections account for the majority of acute illness in children. Infections are
influenced by the age of the child, the season, living conditions, and preexisting medical problem. Infections often spread from one structure to another because of the contiguous
nature of the mucous membrane lining the entire tract [1]. Respiratory tract infections are the disorders characterized by the acute inflammations of
nose, pharynx, tonsils and sinus. It is the most common complaints in world wide. It objects
children and adult also it is the most common in under five children [2]. Rhinitis is a group of disorder characterized by inflammation and irritations of mucous
membrane of the nose. It may be allergic or non-allergic. It is estimated that 10-15% of
the population of United States has allergic rhinitis. Rhinitis may be acute or chronic condition
symptoms may be seasonal. [Hay fever] [3]. Respiratory tract infection so wide spread in the general population that is impossible to
prevent children are more susceptible because they have not yet develop resistance of many
viruses. Very young infants are subjected to serious complication such as pneumonia and
attempt should be made to protect them from exposure. The respiratory tract is the frequent
site of illness in infants and children. The respiratory system changes during infancy and
early childhood. As a new lung tissue continues to an existing structure and functional
changes [4].

Jon couniel (2019) conducted a longitudinal study to assess the epidemiology and clinical
characteristics of community acquired pneumonia in hospitalized children consecutive
immune competent children hospitalized with radio graphically confirmed lower respiratory
tract infection. 154 children were selected Median age was 55 months for the study. The
findings in 79% of children typical respiratory bacteria were identified in 60% virus in 45%,
Mycoplasma pneumonia in 14%, Chlamydia pneumonia in 90% and mixed bacterial on virus
infection is 23% [5].

Need for the study

The incidence of respiratory tract infection in developing countries as comparable to those of
developing countries.
But cause specified mortality due to respiratory tract infections is 10-15 times high in developed countries. And the epidemiological data of the problem and the risk factors of respiratory tract infection in rural area is high [6]. The risk of Indian child dying due to respiratory tract infection is 32-75 times more than that of his counter in developed world. In India RTI account for 14.3% deaths during injury and 15.9% of deaths during age of 1-5 years in urban and 2.3 episodes per year rural [7]. Every year due to RTI is under five children is responsible for an estimated 11 million of death among worldwide. It is estimated that Bangladesh, India, Indonesia and Nepal together amount for 14% of the mortality due to respiratory infection according to 2010 censes. According to WHO, RTI causes 10000 deaths in India [8].

Statement of Problem
A study to assess the prevalence of respiratory tract infections among under-five children in Chemudugunta at Nellore, A.P.

Objectives
- To assess the prevalence respiratory tract infections among under-five children.
- To identify the risk factors of respiratory tract infections among under-five children.
- To find out association between prevalence of respiratory infections with socio demographic variables.

Delimitations
- Under-five children aged 0-5 years living in Chemudugunta Village at Nellore.
- Sample size of 100 children.

Methodology
Research Approach
A quantitative approach was adopted to determine the research study.

Research Design
The present study was conducted by using descriptive research design.

Setting of The Study
The study was conducted in a rural area, Chemudugunta at Nellore.

Target Population
The target population for the present study includes under five children.

Population
Target Population
The target population for this present study includes all under five children.

Accessible Population
The accessible population for the present study includes under five children living in rural area, Chemudugunta at Nellore and who fulfilled the inclusion criteria.

Sample
The sample for the present study was under five children.

Sample Size
The sample for the present selected from 100 under five children.

Sampling Technique
Non probability convenient sampling technique was adapted for the study.

Criteria for Sampling Selection
Inclusion criteria
- The children with age group of 0-5 years living in Chemudugunta Village.
- Children who are present in the village at the time of data collection.
- Children of both male and female.

Exclusion criteria
- Children above five years of age.
- Mothers of children who are not willing to participate in the study.
- Children who are acutely ill.

Variables of The Study
Research variable: The prevalence of respiratory tract infection and its risk factors.

Demographic variables: Includes age of a child, sex of child, weight of the child. Developmental stage, history of previous illness, history of exposure to passive smoking, immunization status, general body built, any nutritional disorder/deficiency and family history of bronchial asthma.

Description of The tool
Part-I: It deals with socio demographic variables.
Part-II: An observational checklist to assess the symptoms of respiratory tract infections and its risk factors.

Data Analysis and discussion
Table 1: Shows the prevalence of respiratory tract infection among under five children. (N=100)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Prevalence of respiratory tract infection</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No infection</td>
<td>50</td>
<td>50%</td>
</tr>
<tr>
<td>2.</td>
<td>Mild infection</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>3.</td>
<td>Moderate infection</td>
<td>15</td>
<td>15%</td>
</tr>
<tr>
<td>4.</td>
<td>Severe infection</td>
<td>34</td>
<td>34%</td>
</tr>
</tbody>
</table>
The study concluded that almost half of the under-five children (50%) had no respiratory tract infection and 34% (34) have severe respiratory tract infection. So the mothers of under-five children should take the necessary action to take early and prompt treatment in order to avoid the complications associated with respiratory tract infection.

**Table 2:** Mean and standard deviation of respiratory tract infection among under-five children. (N=100)

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under-five children</td>
<td>14.49</td>
<td>5.5</td>
</tr>
</tbody>
</table>

**Table 3:** Association between prevalence of respiratory tract infection with demographic variables. (N=100)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Demographic Variables</th>
<th>No RTI</th>
<th>Mild RTI</th>
<th>Moderate RTI</th>
<th>Severe RTI</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F %</td>
<td>F %</td>
<td>F %</td>
<td>F %</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Age of child</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) 0-1 yrs</td>
<td>9 9</td>
<td>1 1</td>
<td>8 8</td>
<td>10 10</td>
<td>C=16.74</td>
</tr>
<tr>
<td></td>
<td>b) 1-2 yrs</td>
<td>26 26</td>
<td>- -</td>
<td>5 5</td>
<td>15 15</td>
<td>T=11.81</td>
</tr>
<tr>
<td></td>
<td>c) 3-4 yrs</td>
<td>13 13</td>
<td>- -</td>
<td>2 2</td>
<td>9 9</td>
<td>P&lt;0.05 S*</td>
</tr>
<tr>
<td></td>
<td>d) 4 yrs</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Developmental stage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Infant</td>
<td>11 11</td>
<td>1 1</td>
<td>8 8</td>
<td>10 10</td>
<td>C=17.71</td>
</tr>
<tr>
<td></td>
<td>b) Toddler</td>
<td>39 39</td>
<td>- -</td>
<td>7 7</td>
<td>24 24</td>
<td>T=14.12</td>
</tr>
<tr>
<td></td>
<td>c) Preschooler</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>P&lt;0.05 S*</td>
</tr>
<tr>
<td>3.</td>
<td>Sex of child</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Male</td>
<td>29 29</td>
<td>1 1</td>
<td>7 7</td>
<td>14 14</td>
<td>C=21.33</td>
</tr>
<tr>
<td></td>
<td>b) Female</td>
<td>21 21</td>
<td>- -</td>
<td>8 8</td>
<td>20 20</td>
<td>T=19.65</td>
</tr>
</tbody>
</table>

**Major findings of the study**

- Regarding the among 100 samples 50% (50) have no respiratory tract infection, 1% (1) have mild respiratory tract infection, 15% (15) have moderate respiratory tract infection and 34% (34) have severe respiratory tract infection.
- The mean score of respiratory tract infection of under-five children was 14.49 and standard deviation was 5.5.
- Regarding association between level of risk score and demographic variables, age of child, developmental stage and sex of the child had significant association at P<0.05 level.

**Conclusion**
The study concluded that almost half of the under-five children had no respiratory tract infection and 34 of them had severe respiratory tract infection. So the mothers of under-five children should take the necessary action to take early and prompt treatment in order to avoid the complications associated with respiratory tract infection.

**References**