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Research Article

**RISK FACTORS DETERMINATION IN CHILDREN FOR
INFECTIONS OF LOWER RESPIRATORY TRACT**¹Dr Muhammad Usman, ²Dr Nageen Javaid, ²Dr Muhammad Saad Ali¹Allied Hospital Faisalabad, ²DHQ Hospital Gujranwala.

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Abstract:

Objectives: There are 2 types of the ARTI (Acute Respiratory Tract Infections) as upper RTI & lower RTI. These acute diseases are very frequent in the childhood period. The objective of this research work was to find out the risk factor for the lower RTI (Respiratory Tract Infections) in our areas.

Methodology: Total 350 children who appeared at Pediatric ward of Allied Hospital Faisalabad, suffering from lower RTI were the part of this study. The record of the information about their checkups, previous history, family history of infection & data about the factors of environment, maintained. All these information recorded on a special organized Performa.

Results: The evaluation of the deficiency of vaccination, duration of feeding through breasts, age at the time start of milk of cow, asthma history in family & food allergy, the amount of the admitted patients in same room, amount of the people who were living in the same house and smoking cigarettes around those children carried out for the availability of the lower respiratory tract infections & risk factors of this complication observed as 1.690, 1.710, 1.610, 1.690, 1.20,

1.470, 1.560 and 2.630 ties increased.

Conclusion: Standard clinical diagnosis of disease, precise & proper use of antibiotic, proper nutrition, betterment in the social and economic condition and purging of the factors of environment will decrease the rate of morbidity & mortality among children because of lower RTIs.

Keywords: Food Allergy, Asthma, Methodology, Environmental, Factors, Nutrition, Allergy, Complication, Clinical.

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INTRODUCTION:

ARTIs are the most common diseases in small children. Majority of these complications are upper RTI. Pneumonia, bronchiolitis and croup syndrome can be the part of lower RTI because this region consists larynx and lower part. Lower RTI is very frequent complication in the whole world among children and it is also the reason of the mortality of the children having less than 5 year of age in the undeveloped countries as well as the countries which are under development. In the countries which are under development as in Pakistan, less weight at the time of birth, lack in nutrition & high amount of populations are the risk factors of high frequency of morbidity & mortality due to lower RTI [1]. There are high occurrence of these infections in the children exposed to smoking which can lead to asthma or sudden mortality of the child [2]. There is a high prevalence of the coughing, wheezing & infection of pulmonary in the children whose mothers are habitual of smoking. It depends upon the quantity of the cigarettes used by the mothers [3]. In accordance with the data of 1999 of WHO, 10.50 million children having the age of less than 2 years are losing their lives every year in the whole world because of these preventable diseases. Lower RTIs are the cause of 28.0% deaths of children [4]. In accordance with the collected information of health ministry of Pakistan, lower RTI are the reason of deaths between 0 to 4 years at frequency of 40.0% [5]. In this research work, we aimed to find out the risk factors of lower RTI in terms of less social and economic level in our areas.

METHODOLOGY:

This research work conducted in Allied Hospital Faisalabad. If the patients found with neither expose to

chemicals, nor have any chronic disease and they were willing to participate were the part of this study. Patients suffering from severe diseases, children with extreme complications of neurological & metabolism and children having less than 30 days of age were not the part of this research work. The data related to lower RTI decreases with the passage of time [6, 7]. The questioning about the signs & symptoms in the last fifteen days of disease carried out from patients. Total 350 patients who were fulfilling the standard were the part of this research work. The record of previous information, anamnesis, history of other family members, and data about the factors of environment maintained on the form. Crossing greater than 4 lower RTIs declared as recurrent lower RTI. The gathered information to find out the risk factors of lower RTI was under analysis with the utilization of SPSS.

RESULTS:

Total 350 patients of Lower RTI were the part of this work. Seventy percent (n: 207) were the male patients and thirty percent (n: 143) were girls. The risk of the lower RTI in the male patients was 1.830 times greater than the females. The average age of the patients was 28.30 ± 22.80 months & average weight at the time of birth was 3073.70 ± 409.50 g. the average of the mothers of patients was 27.50 ± 5.80 years. When the evaluation of these patients carried out regarding the level of the qualification of mothers, the average level of education was below eight years. The risk of lower RTI in the infants whose mothers found with < eight year qualification was 2.070 times greater than the infants whose mothers found with higher education as described in Table-1.

Table-I: Some Factors Which Cause LRTI.

Risk Factors		LRTI (+)	LRTI (-)	Relative Risk	95% CI
Gender	Male	24.0	119.0	1.00	0.470-0.970
	Female	56.0	151.0	1.83	1.040-1.490
Maternal Education Level	>8 years	24.0	127.0	1.00	0.440-0.910
	<8 years	56.0	143.0	2.07	1.100-1.580
Vaccination Status	Complete	74.0	264.0	1.00	0.880-1.000
	Incomplete	6.0	6.0	1.69	1.110-10.170
Feeding with Breast milk	>6 months	58.0	221.0	1.00	0.760-1.050
	<6 months	22.0	49.0	1.71	0.970-2.340
Beginning Cow milk	>12 months	48.0	191.0	1.00	0.690-1.030
	<12 months	32.0	79.0	1.61	0.980-1.890

History of Asthma	Negative	66.0	240.0	1.00	0.830-1.030
	Affirmative	14.0	30.0	1.69	0.870-2.820
Food Allergy	Negative	74.0	253.0	1.00	0.920-1.050
	Affirmative	6.0	17.0	1.20	0.480-2.920
Room members	<3	48.0	186.0	1.00	0.710-1.060
	>3	32.0	84.0	1.47	0.930-1.770
Family history of URTI	Negative	40.0	171.0	1.00	0.640-1.030
	Affirmative	40.0	109.0	1.56	0.980-1.670
Smoking Around Baby	Negative	32.0	172.0	1.00	0.470-0.830
	Affirmative	48.0	98.0	2.63	1.300-2.090

When the evaluation of the status of vaccination, period of feeding through breasts, age at the start of milk of cow, family background about disease of asthma, food allergy, quantity of the patients getting treatment in the same room and family members who were living in the same home carried out for the

availability of lower RTI, we found the 1.690, 1.710, 1.610, 1.690, 1.20, 1.470, and 1.560 fold enhancement in the development of the risks of lower RTI as available in Table-1. We also noticed that cigarette smoking near to the children enhanced the risk of lower RTI 2.630 times (Table-1).



DISCUSSION:

Lower RTI is very common reason of high rate of mortality & morbidity among children in the whole world [8]. In the year of 2002, Lower RTI was the reason of 3.90 million mortalities in the whole world according to the data of WHO. Lower RTI consists 6.90% deaths because of diseases of infection & it is the cause of under five year mortality [4]. In various research work, males were more prone to the risk of having lower RTI as compared to females. So, gender of male is very sensitive against factors of genetic & environment [9]. In this research work, gender of male discovered to have 1.830 times greater risk as compared to girls for developing the lower RTI. The association among education of mother & health of child should be well acknowledge [7, 10]. Etiler [7] have assessed the association between level of education of mothers & lower RTI development. Outcome of this study was similar to previous works. In the same manner, we found that risk of lower RTI in the children whose mothers were < 8 years of education was 2.070 times greater than the patients whose mothers have greater level of education (Table-1).

Vaccination is very necessary to control the infections, we found 1.690 high danger of Lower RTI in children found with improper vaccination. The occurrence of Lower RTI & other GI diseases were less in the children who were on breast feeding [11]. The reduction in the breast feeding leads to the prevalence of the diseases of respiration [2, 13]. Sipahi concluded that allergy due to cow milk was the cause of recurrent lower RTI in 11.10% patients [14]. The involvement of the lower tract of respiration has association with the high delay in the initiation of the symptoms [15]. The danger of lower RTI was 1.560 times greater in the patients who were living in the house where the other patients were present. The contact with the passive smoking is also a risk factor of these infections of respiratory function [16-18]. Prolonged symptoms after the treatment were available in the patients who found exposed to passive smoking [19].

In some research works on the same literature in Turkey showed that the rate of determined passive drinking with cotinine calculations changes from fifty-three to eighty-five percent in the children [20, 21]. This research work has demonstrated that divulging into 2nd hand smoking found with 2.630 times high risk in the patients suffering from lower respiratory tract infections. "The agreement of the children right" gave the right to every children to have a good health [22]. More than half quantity of the children are exposing to

passive smoking in the whole. The prevention measures are very vital for the health of children.

CONCLUSION:

This current research work showed that social & economic condition and the factors of the environment are the cause of the risk factors of lower RTI. Its relationship with the high education of mother & smoking supports this point. Social & economic condition affects the level of mother education. We cannot under estimate the social & economic as well as factors of environment in lower RTI control which is one of the vital reason of morbidity & mortality in our region.

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