



Correlated Risk Of Diarrhea Among The Children's Under The Age Of 5 Years At Selected Area Of Vijayapur District

¹Shankarling B . Javali, ²Dr Amit Mathur

¹Research Scholar, ²Research Supervisor

¹Department mathematics and Statistics, ²Department mathematics and Statistics ¹Himalayan
University , Itanagar

²Himalayan University , Itanagar

Abstract

Background

Diarrhea remains one of the leading causes of morbidity and mortality among children under five years of age, particularly in low- and middle-income regions. Identifying the risk factors associated with diarrheal diseases is essential for developing targeted interventions. This study aimed to assess and correlate the risk factors contributing to diarrhea among under-five children in a selected area of Vijayapur district.

Objectives:

The main objective of this study is to find age wise prevalence and risk factors of diarrhea among the children's under the age of 5 years.

Materials and method:

Cross sectional study was conducted in the selected ward of Vijayapur district on 130 children's

In order to find the prevalence of diarrhea, practices, nutrition, and immunization

Results:

Overall prevalence of diarrhea among the children's under the age of 5 year was found to be 23.1%. Male children's were more prone to diarrhea. 30.0% male's Childs and 17.1% female child were affected with diarrhea. The diarrhea prevalence was more (37.5%) in the age group 1-2 years followed by 35.7% in the 2-3 years of age group. As the age increases prevalence of diarrhea decreases. Diarrhea was seen in 20.0% exclusive breast feeding children's and 33.3% in children's who were breast feeding less than or equal to 6 months. 26.2% underweight children's had diarrhea and 21.5% normal children's had diarrhea

Conclusion:

It was concluded that prevalence of diarrhea among the children's under the age of 5 years was high. It was also understood that the , diarrhea among the children's under the age of 5 years can be controlled by modifying feeding practice , source of drinking water and also providing nutrition food to children's

Key Words: Diarrhea, Correlated Risk Children under the age 5(U5C)

Introduction:

One of the main causes of under-five child mortality and morbidity worldwide is diarrhea. These illnesses can be brought on by infections with bacteria, viruses, and protozoan parasites, particularly in young and adult children¹. Acute diarrhea accounts for 16% of pediatric mortality worldwide. The majority of these deaths take place in low- and middle-income nations, and the current initiatives can prevent them². Lack of education, exclusive breastfeeding, breastfeeding for less than a year, roundworm infestation, nutritional status, immunization status, night blindness, sex of the baby, literacy, personal hygiene, overcrowding, tool/garbage disposal, and water supply source, are the factors associated with a higher prevalence of diarrhea^{3,4}. The population of Vijayapur district was so diverse, all caste peoples are dwelling in and all these peoples have different life style. Keeping these in mind, the study was undertaken to identify age wise prevalence of diarrhea among the children's under the age of 5 years. And also to find out correlated risk factor diarrhea among the children's under the age of 5 years.

Materials and Method:

A population based cross sectional study was conducted on the selected ward of Vijayapur district. The ward no 32 of municipality was randomly selected for this study. Since all children under the age of five were counted, 130 people made up the sample size. The data regarding socio-demographic variables and health status was collected using the structured questionnaire.

Data collection was done by doing house-to-house survey, with an average of 10 children's per day.

Inclusive criteria:

1. The study includes children's under the age of 5 years
2. The study includes children's from selected wards only

Exclusive criteria

1. The children's with severe illness due to diarrhea
2. The children's whose parents don't want their child to participate in the study

Statistical analysis:**Table no 1: Age wise distribution of diarrhea among the children's under the age of 5 years**

Age year	Male		Total	Female		Total	Overall Total	Overall Diarrhea (%)
	Diarrhea Present (%)	Diarrhea absent (%)		Diarrhea Present (%)	Diarrhea absent (%)			
0-1	03 (20.0%)	12 (80.0%)	15 (25.0%)	02 (16.7%)	10 (83.3%)	12 (17.1%)	27 (20.7%)	05 (18.5%)
1-2	07 (50.0%)	07 (50.0%)	14 (23.3%)	02 (20.0%)	08 (80.0%)	10 (14.3%)	24 (18.4%)	09 (37.5%)
2-3	05 (31.3%)	11 (68.7%)	16 (26.7%)	05 (41.7%)	07 (58.3%)	12 (17.1%)	28 (21.5%)	10 (35.7%)
3-4	02 (20.0%)	08 (80.0%)	10 (16.7%)	01 (5.0%)	19 (25.0%)	20 (28.6%)	30 (23.1%)	03 (10.0%)
4-5	01 (20.0%)	04 (80.0%)	05 (8.3%)	02 (12.5%)	14 (87.5%)	16 (22.8%)	21 (16.2%)	03 (10.0%)
Total	18 (30.0%)	42 (70.0%)	60 100.0%	12 (17.1%)	58 (82.9%)	70 100.0%	130 100.0%	30 (23.1%)

From the table no 1, it was seen that, study population consists of 70 children's under the age of 5 years. Out of 7130 children's, 60(46.1%) are males and 70(53.9%) are females. Majority 30(23.1%) of the children's were found to be in the age group of 3-4 year and the prevalence of diarrhea was lowest in this age group. The highest prevalence (36.5%) was seen in the age group 1-3 years. The overall diarrhea prevalence among the children's under the age of 5 years was found to be 23.1% which is somewhat similar to the study conducted by ansari et al⁵ in which prevalence was found to be 22.5%

Table no 2: risk correlates of diarrhea among the children's under the age of 5 years

Correlates	Diarrhea		Total	Odds Ratio	Z-value & p-value
	Present (%)	Absent (%)			
Breast Feeding					
≤ 6 months	5(33.3%)	11(73.3%)	15	1.45	0.58 & 0.55
>6 months	19(20.0%)	76(80.0%)	95		
Bottle Feeding					
Ye s	5(25.0%)	15(75.0%)	20	1.26	0.41 & 0.68
No	23(20.9%)	87(79.1%)	110		
Vaccination					
DPT3					

Yes	3(27.2%)	8(72.8%)	11	1.27	0.34 & 0.73
No	27(22.7%)	92(77.3%)	119		
Source of drinking water					
Protected	7(17.5%)	33(82.5%)	40	0.61	1.00 & 0.31
Unprotected	23(25.5%)	67(74.4%)	90		
Nutritional status					
Under weight	11(26.2%)	31(73.8%)	42	1.28	0.58 & 0.56
Normal	19(21.5%)	69(78.4%)	88		

Table no 2 showed that, there risk correlation is not significant with prevalence of diarrhea among the children's under the age of 5 years

Discussion:

Gender:

Among the study participants in our study, male children's were more effected diarrhea (30.0%) than female children's (17.1%). The reverse pattern was observed in the study conducted by Stanly AM in south India and in their study females children's were found to have more prone to diarrhea than male children's⁵

Breast feeding and bottle feeding

In the present study, diarrhea was found in 33.3% of the children's under the age of 5 years who were breast feeding less than or equal to 6 years. 20.05 of children's had diarrhea among the exclusively breast feeding children's. Among the bottle feed children's 25.0% had diarrhea. It was seen that usually bottle fed children's at great risk of diarrhea in comparison with the children's who were breast feed due to milk contamination. But in our study it was not statistically significant, the odds of bottle feed children's having diarrhea was approximately 1.26 times greater risk than those who were not bottle feed.

Vaccination

In the presents study, diarrhea was found in 27.2% of children's who had DPT3 vaccination but it was not statistically significant.

Source of drinking water

In this present study, it was seen that, 25.5% of children's who use unprotected source of drinking water had diarrhea. But usually the children's who gets unprotected drinking water has higher risk of having diarrhea. In this study, the odds of unprotected drinking water children have had 0.61 time higher risk than those who use protected drinking water.

Nutritional status

In this presents study, underweight children's had 26.2% risk of diarrhea and normal children's had 21.5% of diarrhea. The poor nutritional status and diarrhea in the children is the major risk of death among the children's. It can be prevented by implementing proper nutritional program.

Conclusion

In the present study, it was seen that, diarrhea among the children's under the age of 5 year was high. It can be prevented by proper nutritional program and modifying the risk factors

Acknowledgement

We are grateful to department of community medicine al-ameen medical college for granting us to conduct the study. We are also grateful to medico socio workers and people of selected ward where the study was conducted

References

1. U.D. Parashar, J.S. Bresee, J.R. Gentsch, R.I. Glass Rotavirus. Emerging infectious diseases, 4 (4) (1998 Oct), p. 561.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2640254/pdf/9866732.pdf>
2. Park K Park's Textbook of preventive and social medicine. 201121st ed Jabalpur, India Banarasidas Bhanot Publishers:528
3. Shah SM, Yousafzai M, Lakhani NB, Chotani RA, Nowshad G. Prevalence and correlates of diarrhea Indian J Pediatr. 2003;70:207–11
4. Stanly AM, Sathiyasekaran BW, Palani G. A population based study of acute diarrhea among children under 5 years in a rural community in South India Sri Ramchandra J Med. 2009;1:1–7
5. Stanly AM, Sathiyasekaran BW, Palani G. A population based study of acutediarrhea among children under 5 years in a rural community in South India.Sri Ramchandra J Med 2009; 1:1-7.