

**Prevalence of Diseases in the Children of Muzaffarpur City of Bihar – India.**

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**Abstract**

**Aims:** To study the prevalence of diseases in the children of Muzaffarpur city of Bihar, India.

**Methods:** This study is an observational study conducted after letters from district officials in 8 free camps in Muzaffarpur city, India. Children around the camps were invited for free checkups. 2846 children were tested for all possible diseases.

Clinical history, clinical and physical examination, investigation such as CBS, urine routine, ESR, LFT, RFT, Anti HAV, X-ray (chest, neck lateral, dental, X-ray for para nasal sinus), Typhi RDT, Malaria RDT, CRP, RA factor, thyroid profile, CNS testing, sputum gram stain, AFB, and S Vitamin D3 were done and 9585 diseases were diagnosed. The data were analyzed, the statistical package of SPSS version 21 was used, and the P value of <0.05 was considered statistically significant.

**Results:** A total of 2846 children were invited for free checkups, in which 9585 diseases were diagnosed. Fever without focus was diagnosed in 3 camp's children-≤0.3%, in 5 camp's children >0.3% to 0.6%, and respiratory

diseases were diagnosed in 5 camp children-≤8.0 and 3 camp children >8.0% to 8.4%.

Ophthalmic diseases were diagnosed in 4 camp's children-≤5.0% and in the other 4 camp's children the percentage was >5.0% to 5.5%, and gastrointestinal diseases were diagnosed in 5 camp's children ≤7% and in the other 3 camp's children->7.0% to 9.8%.

Musculoskeletal diseases were diagnosed in 4 camp's children ≤ 1.5% and the rest of 4 camp's children->1.5% to 2.1%, and gynecology diseases were diagnosed in 5 camp children-≤ 1.0% and in 3 camp's children > 1.0% to 1.3% with statistical significance of (Chi-square-22.4800, p-value 0.0021).

Skin diseases diagnosed in 4 camp's children-≤ 7.0% and in rest of the 4 camp's children > 7.0 to 8.6%, and diseases of the nervous system diagnosed in 5 camp's children-≤3.5% and in 3 camp's children->3.5 to 4.3% with statistical significance of (Chi-square -29.5690, P- Value 0.0030).

Psychiatric disorders diagnosed in 1 camp's children-≤ 2.5% and in the rest of the 7 camp's children psychiatric

disorders were >2.5% to 3.6%, and surgical diseases diagnosed in 4 camp's children  $\leq$  0.5% and in 4 camp's children >0.5% to 0.7%.

ENT diseases diagnosed in 7 camp's children  $\leq$  5.0% and in 1 camp's children, the percentage was 5.0% to 5.7% with statistical significance of (Chi-square-23.264, P-value-0.0002), and nephrological diseases diagnosed in 4 camp's children  $\leq$  1.0% and in rest of 4 camp's children >1.0 to 1.6%.

Cardiovascular diseases diagnosed in 3 camp's children  $\leq$  1.3% and in rest of the 5 camp's children >1.3% to 1.5%, and endocrinological diseases diagnosed in 5 camp's children  $\leq$  1.5% and 3 camp's children >1.5% to 1.8%.

Hematological diseases were diagnosed in 2 camp's children  $\leq$  15.0%, and in 6 camp's children >15.0% to 17.5% with a statistical significance of (Chi – square - 37.3420, P-value-0.0001), and dental diseases diagnosed in 5 camp's children  $\leq$  4.5%, and in 3 camp's children >4.5% to 6.8%.

Neonatal diseases diagnosed in 2 camp's children  $\leq$  3.0% and in rest of the 6 camp's children >3.0 to 3.7%, and nutritional deficiency diagnosed in 2 camp's children  $\leq$  20.0% and in rest of the 6 camp's children the nutritional deficiency diagnosed >20.0 to 25.5% with the statistical significance of (Chi-square 102.1078, P-value-0.0001).

Vaccine-preventable diseases were diagnosed in 6 camp's children  $\leq$  1.5%, and in 2 camp's children > 1.5% to 1.8%, and syndromic disorders were diagnosed in 4 camp's children  $\leq$  0.2%, and in other 4 camp's children > 0.2% to 0.4%.

Miscellaneous diseases such as pediculoses, injuries, poisoning, and lymphadenopathy were diagnosed in 6 camp's children  $\leq$  10.0%, and in 2 camp's children >10.0% to 12.4% with the statistical significance of (Chi-square-98.5218, P-value 0.0001).

**Conclusions:** Several studies were published in children either with one disease or two, but we presented in our study, all the possible diseases (system-based). Our study found that a high percentage of diseases observed and diagnosed were nutrition deficiencies followed by miscellaneous diseases, hematological diseases, ENT diseases, diseases of the nervous system, and Gynecology diseases in children of Muzaffarpur city.

**Keywords:** Children, Nutrition deficiencies, Haematological diseases, Gynecology diseases, ENT diseases, Wasting, Stunting.

### Introduction

Diseases in children under the age of 18 make them vulnerable and lead to a higher mortality rate in these age groups. Infectious diseases were more common in children under the age of 5, but in older children along with infectious diseases, non-communicable diseases were also common.

Avramidou, M et al reported, in recent years, digestive issues such as intestinal blockage, reflux issues, ulcers, and carcinomas were found more common in children<sup>1</sup>. As per Robin, S. G et al study, digestive diseases were found in infants 27%, toddlers - 40.5%, in children 9.9%, and in adolescents, digestive diseases were diagnosed 27.5%<sup>2</sup>.

In children, Saikia, D et al describes that respiratory and cardiovascular diseases are also more common, and as the neonates have narrow air passage, weak lungs, asthma, other respiratory diseases, and cardiovascular diseases are very frequent and common in children<sup>3</sup> and Wang, H. T et al reports >305 of children suffer from asthma due to external air pollutants<sup>4</sup>.

Among children fever or enteric fever are very prevalent and in infants under 3 months fever without a source are leading cause of death explains Phasuk, N et al<sup>5</sup>.

Rasheed, M. K et al reported that approximately 1000 children annually are suffering from typhoid fever<sup>6</sup>.

In children, ophthalmic diseases make them more weak mentally and physically as vision is the predominant organ essential for all the activities involved in life, and Zhang, X et al describe diseases of the eyes in children reduce their emotional, and cognitive development, increasing their vulnerability in society<sup>7</sup>. Wang, L. L et al reports that astigmatism influences visual acuity in children<sup>8</sup>.

In children, Sánchez-González, M. C et al explains the most common musculoskeletal diseases are musculoskeletal pain due to the high activity making the pain in the body muscle, static postures bringing neck, back, and shoulder pain<sup>9</sup>.

In children, genitourinary disease prevalence and their types vary based on their genders. In the study, B et al describe as in girl children the urethra and vagina are closure, and the infection rate is also high, girls between the age of 3-4 years, fall sick due to genitourinary diseases, and in boys, the urinary tract inflammation occurs because of the genital organ abnormalities<sup>10</sup>.

In a study conducted on girls  $\leq 18$  years by Wohlmuth, C et al reported vaginal malignancies in 4.5%, ovarian cancer in 87.5%, vulvar malignancies in 1.6%, uterine cancer in 2.5%, and cervical malignancies in 3.95 of girl children<sup>11</sup>.

In children and adolescents, skin diseases are more common, and different skin diseases occur due to several reasons, published data in Nigeria by Ayanlowo, O et al showed overall skin diseases in children was 26.1%, vitiligo-3.2%, acne vulgaris-3.5%, and skin tumors in 2.0% of their children<sup>12</sup>. In Ethiopian children, Kelbore, A. G et al reported the prevalence of skin diseases were impetigo -13.8%, vitiligo-3.6%, scabies-9.6%, pigmented diseases-7.4%, and acne vulgaris-1.1%<sup>13</sup>.

The disease of the nervous system in children varies from trauma-caused neurological disorders to infection-caused neurological diseases. Neurological disorders and diseases are cerebral palsies, muscular dystrophy, epilepsy, and many more. Off ringa, M et al reports that 30% of children face adverse effects due to neurological issue such as febrile seizures and other diseases of the nervous system<sup>14</sup>. In children, the other most common neurological disorder was Cerebral Palsy (CP) CP occurs in children due to low birth weight and CP occurs most predominately in prematurity. A recent study by Patel, D. R et al reports that the incidence rate of CP is 2-3%/1000 (live births)<sup>15</sup>.

Psychiatric disorders in children play an important role in their quality of life. The most common psychiatric disorders are depression, frequent headaches, hyper activity, anxiety, and conduct fluctuation such as oppositional, com pulsiveness, and stress after trauma.

A reported study by Lecavalier, L et al on psychiatric disorders conducted in 3-17 years of the children showed hyper activity in 81% of children, an oppositional disorder in 46%, and 42% of children had anxiety disorders<sup>16</sup>.

In children <18 years, surgical disorders are problematic issues that bring an excess of discomfort in children's life and their education. Inguinal hernia is one of the prevalent surgical diseases in children and Bowling, K et al and Oberg, S et al reported the incident rate of inguinal hernia in children is 1-5%, more common in boys (6 times higher in boys than girls)<sup>17,18</sup>.

ENT diseases are commonest issues that children face, mainly ear infections, cleft palate, hearing loss, nasal polyps, and epistaxis. Di Studio, A et al described that in children < 8 years, due to an immature immune system recurrent tonsillitis are occurring and due to tonsillitis, the infection due to *S. aureus* is also very frequent in children<sup>19</sup>.

The other ENT issue the children experience is the cleft palate and the study by Lewis, C. W et al recommends for children <6 months with cleft palate-must follow good nutrition, for children 1-5 years with cleft palate-reinforce to use of fluoride toothpaste, for children 6-11 years with the cleft palate-consult orthodontist, and children 12 - 18 years with cleft palate- continuous nutrition on food with a regular checkup with the orthodontist<sup>20</sup>.

In children, a nephrological disease plays a very important disease scenario, and several forms of nephrological diseases such as renal calculus, CKD, and nephritic syndrome. Audrézet, M. P et al study reports that 3 % of children suffer every year due to kidney diseases (polycystic) which are mutational kidney diseases<sup>21</sup>. Renal calculi are the other nephritic diseases found in children, Fazel, M et al describes, that 18.4% of children were affected by renal calculi in 1999, but in recent years only 57 children were affected by renal calculi but improper treatment leads to persistent disability to the children<sup>22</sup>.

Similar to elderly and young adults, cardiovascular diseases bring early mortality in children, and Weaver, D. J et al describe that children with CKD due to uremia also develop cardiovascular diseases that act as hemodynamic homeostasis and are not able to function in the long run, leading left ventricular failure in children leading mortality due to cardiovascular diseases in children<sup>23</sup>.

Hypertension is one of the risk-bearing cardiovascular diseases and hypertension in children was a hidden risk factor in children dying due to unknown reasons, and Rao, G et al study recommends that priorities must be given to improve the clinical decision of diagnosis, routine management of children with hypertension<sup>24</sup>.

Children are always affected by several factors before they grow to adulthood and one such disease is an

endocrinological disease which affects the growth of the children and brings endocrinological diseases such as diabetes, high lipid, obesity, hypo thyroidism, hyper thyroidism, and neoplasia. Stage, S et al report that due to organic pollutants, chemicals, air pollution, radiation exposure, and smoking during pregnancy brings several types of endocrinological diseases in children<sup>25</sup>. Crisafulli, G et al recommends L-T4 for the treatment of endocrinological conditions such as subclinical hypothyroidism<sup>26</sup>.

In children, hematological diseases are many, and several hematological diseases can be curable with adequate and proper treatment. A very common hematological disease is anemia in children, and Allali, S et al reports that chronic anemia can lead to growth impairment, impairment in cardiac function, and insufficient cognitive capacities in children<sup>27</sup>. Hemophilia is also one of the other Hematological diseases that make children's life challenging life in school, and in playing areas Bert amino, M et al reports that treatment for hemophilic children must be personalized, and lifestyle-based interventions will be more appropriate<sup>28</sup>.

In children, dental caries is one of the diseases, and a survey conducted on 3859 children by Abed, R et al showed the dental caries is calculated as even 1 tooth is infected pupal involvement, and the presence of fistula and children's dental ulceration is related to parent's excess of work time, and children's lesser sleep<sup>29</sup>.

Neonatal diseases such as Low Birth Weight (LBW), feeding difficulty, hyperbilirubinemia, abdominal colic, vaginal bleeding, breast enlargement, umbilical hernia, and nappy rash are very commonest neonatal diseases in children. Published data by Yu, C et al show in 614 infants, 53.5% of infants developed hyperbilirubinemia<sup>30</sup>.

The other very common neonatal disease is an umbilical

hernia in children, especially in newborns. The research by Bowling, K et al describes that 15% of incarcerated hernia may be re-incarcerated in the time 15 days if the hernia is not repaired<sup>31</sup>.

In children, nutrition deficiency diseases such as stunting and wasting are due to poor nutrition intake and excess depression in children also makes them take less food, which in turn brings nutrition-deficient diseases in children. Stunting in children can be by many factors such as LBW, inadequate intake of food by the mother during pregnancy, less glucose, and protein level of the mother or children's food system. The study by Sinha, B et al explained that the stunting of children is due to the genetics of the parents, and a few environmental factors such as the unhygienic way of taking care of children, giving poor nutrient food, and high levels of the depressive atmosphere at home<sup>32</sup>.

Wasting is also one of the nutrient-deficient diseases and wasted children are found around the globe. Severe wasting in children may lead to the death of the children also, and adequate education of child care to the mother, improve the economic status of the parents, a hygienic environment, and sterilized or secure water supply may improve the waste in the children. A published data conducted on 252,797 children by Harding, K. L et al described that wasting in children is associated with the determinants such as shortness of parents, later order of birth, illiteracy of the parents, not proper water supply, and a higher level of household poverty<sup>33</sup>.

In children, vaccine-preventable diseases are also prevalent at a minor level in recent years. In a recent publication, Frenkel, L. D et al describes, even though vaccinations were saving millions of children from vaccine-preventable diseases, a few percent of children die every year. Few non-vaccine serotypes of preventable diseases still wandering around the world for which we

need to invent vaccines<sup>34</sup>. A researcher Santoli, J. M recommended that significant vaccine hesitancy only resulted in outbreaks of certain vaccine-preventable diseases, and we still require information from children's caretakers, health professionals, and media to bring again victory over vaccine-preventable diseases<sup>35</sup>.

In children, syndromic diseases are also prevalent in recent years. A few of the syndrome diseases are Down syndrome, Turner syndrome, and Marfan's syndrome. Bull, M. J describes that Down syndrome can be a phenotypical variable syndromic disease, which has to be treated individually based on their abilities, based on individual medical problems, and requires a unique approach to each individual affected with down syndrome<sup>36</sup>. Marfan's syndrome is also one syndromic disease that affects children and Salchow, D. J et al reported that 12.9% of children were affected by Marfan syndrome diseases<sup>37</sup>.

A few diseases such as head lice (Pediculosis), injuries, poisoning, and lymphadenopathy are miscellaneous, still affect the quality lifestyle of the children, and require the best interventions. Eslam Moradiasl et al reported on a study conducted in 1950 students and found 20.1% of the students both girls and boys had pediculosis the researcher concludes as the manifestations of pediculosis depend on family size, type of washroom, and shared items<sup>38</sup>. The other leading miscellaneous disease is poisoning, lead poisoning in children below 5 years makes them fall for fatality. Mayans, L described in their study as in 2017, 500,000 children in the United States were having a high level of lead in their blood, and the main reasons were low economic level, imported food, living in a house which is older, and poor sanitary living<sup>39</sup>.

The above literature distinctly shows that countless unknown, hidden, unspecified diseases lead children



toward death. Diseases in children are many and unique, some are preventable, and some are treatable, but still, children are vulnerable to several diseases. Children die in large number year by year due to numerous diseases for, a multitude of reasons. Diseases in children vary in different geographical regions of the world; hence this study is conducted to identify the prevalence, types, occurrence, and incidence of diseases in children of Muzaffarpur city of Muzaffarpur district-Bihar-India.

#### **Ethical clearance**

After the institution clearance, these data were collected in the camps and the letters from the district were duly received to conduct this study.

#### **Inclusion criteria**

- All children visited the camps  $\leq 18$  years.

#### **Exclusion criteria**

- People visited the camps for  $> 18$  years.

#### **materials and methods**

##### **Methodology**

##### **Study Subjects**

This study was conducted from the data collected in the camps situated in 8 places of Muzaffarpur city of Muzaffarpur district-Bihar-India. The 8 camps were situated at Damodar Ur, Madarsa Chowk, Neem Chowk, Sumera, Dumarikatra, Aurai, Ababakarpur, and Seeta mani. The children near the camps were invited for a free checkup to diagnose the diseases present in them.

##### **Clinical History**

Clinical histories of all 2846 children were collected. History of chief complaints, prenatal, feeding, nutrient, family, social, schooling, neonatal birth and other signs of diseases, abdomen pain, loose stool, vomiting, signs of dehydration, fever, jaundice, abdominal distension, history of ear ache, any discharge and symptoms duration were interviewed and recorded.

##### **Clinical and Physical Examination**

Children's height and weight are measured. Examination of the head, dental, face, neck, skin, nose, lips, nails, chest, abdomen, vaginal, vitals stability, direct Otoscopic, and neonatal examination was done and recorded.

##### **Investigation and Data Collection**

Investigation such as CBS<sup>40</sup>, urine routine<sup>41</sup>, ESR<sup>42</sup>, LFT<sup>43</sup>, RFT<sup>44</sup>, Anti HAV<sup>45</sup>, X-ray<sup>46</sup> (chest, neck lateral, dental, X-ray for para nasal sinus), Typhi RDT<sup>47</sup>, Malaria RDT<sup>48</sup>, CRP<sup>49</sup>, RA factor<sup>50</sup>, thyroid profile<sup>51</sup>, CNS testing<sup>52</sup>, sputum gram stain<sup>53</sup>, AFB<sup>54</sup>, S Vitamin D3<sup>55</sup> were done and the results were recorded. A total of 2846 children were visited at 8 camps and a total of 9585 diseases were diagnosed.

##### **Analysis**

The diseases were categorized based on the anatomical and physiological system and represented as system-based diseases. The diseases of 2 camps were tabulated in 1 table, and numbers with percentages were tabulated. The statistical significance among the camps for diseases was done and expressed with statistically significant value.

##### **Statistical analysis of data**

Using a statistical package of SPSS version 21 was used for statistical analysis. The descriptive data were expressed as numbers with percentages. The variables were analyzed by Chi-square tests and the P value of  $< 0.05$  was considered statistically significant.

##### **Results**

This study was conducted from the data collected in the camps situated in 8 places of Muzaffarpur city of Muzaffarpur district-Bihar-India. The children near the camps were invited for a free checkup to diagnose the diseases present in them. A total of 2846 children were visited at 8 camps and a total of 9585 diseases were diagnosed. The 8 camps were situated at Damodar pur,

Madarsa Chowk, Neem Chowk, Sumera, Dumarikatra, Aurai, Ababakarpur, and Seetamani.

The distribution of diseases among the children who visited the camp situated at Damodar pur and Madarsa Chowk was described in Table 1.

Table 1: Distribution of Diseases in Muzaffarpur’s Children in the Damodar pur and Madarsa Chowk

Diseases	Damodarpur - Camp – 1 (No of Children = 324) (No of Diseases=1275)	Madarsa Chowk- Camp – 2 (No of Children=427) (No of Diseases=1240)
Fever without focus	7 (0.5)	6 (0.5)
Respiratory Diseases	94 (7.4)	104 (8.4)
Ophthalmic Diseases	62 (4.9)	59 (4.8)
Gastrointestinal Diseases	95 (7.5)	83 (6.7)
Musculoskeletal Diseases	20 (1.6)	26 (2.1)
Gynecological Diseases	4 (0.3)	9 (0.7)
Skin Diseases	83 (6.5)	99 (8.0)
Diseases of the Nervous System	55 (4.3)	39 (3.1)
Psychiatric Disorders	33 (2.6)	33 (2.7)
Surgical Diseases	7 (0.5)	6 (0.5)
ENT Diseases	72 (5.7)	45 (3.6)
Nephrological Diseases	10 (0.7)	11 (0.9)
Cardiovascular Disease	15 (1.2)	10 (0.8)
Endocrinological Diseases	17 (1.3)	16 (1.3)
Haematological Diseases	184 (14.4)	217 (17.5)
Dental Diseases	75 (5.9)	56 (4.5)
Neonatal Diseases	47 (3.7)	39 (3.1)
Nutrition Deficiencies	210 (16.5)	244 (19.7)
Vaccine-Preventable Diseases	23 (1.8)	14 (1.1)
Syndromic Disorders	4 (0.3)	2 (0.2)
Miscellaneous Diseases	158 (12.4)	122 (9.8)

**The distribution of diseases among the children who visited the camp situated at Damodarpur**

A total of 324 children visited Damodarpur camp and 1275 diseases were diagnosed in them. Male children were 178 and female children were 146, among them 7 were newborn male children and 9 were female children, 1 month to 5 years male children were 126, and female children were 90, 6 years to 12 years male children were 31 and female children were 23, 13 years to 18 years male children were 14 and female children were 24 (Table 1).

Out of 324 children, 7 (0.5%) of children suffered from fever, among them, males 4, and females were 3.94 (7.4%) children diagnosed with respiratory diseases, among them males were 47, and females 47. 62 (4.9%) children were diagnosed with ophthalmic diseases, among them, males were 36, and females were 26 (Table 1).

Gastrointestinal diseases were found in 95 (7.5%) children, among them, males 49, and females were 46. 20 (1.6%) of children diagnosed with musculoskeletal diseases, among them males were 11, and females were

9, and gynecological diseases were diagnosed in 4 (0.3%) female children. 83 (6.5%) of children were diagnosed with skin diseases, among them, males were 45, and females were 38. 55 (4.3%) of children have diagnosed with diseases of the nervous system among them males were 28, and females were 27 (Table 1).

Psychiatric disorders were diagnosed in 33 (2.6%) of children among them males were 15, and females were 18. Surgical diseases were diagnosed in 7 (0.5%) of children among them males were 5, and females were 2. Eye Nose Throat (ENT) diseases were diagnosed in 72 (5.7%), of children among them males 37, and females 35. Nephrological diseases were diagnosed in 10 (0.7%), of children among them males were 6, and females were 4. Cardiovascular disease was diagnosed in 15 (1.2%), children among them males were 10, females were 5 (Table 1).

Endocrinological diseases were found in 17 (1.3%) of children among them males and 9 females were 8. Hematological diseases were found in 184 (14.4%) children among them males were 90 females were 94. Dental diseases were diagnosed in 75 (5.9%) of children among them males were 34 females 41. Neonatal diseases were diagnosed in 75 (5.9%) of children among them males were 34 females 41 (Table 1).

Nutrition deficiencies such as stunting, wasting, and both were diagnosed in 210 (16.5%) children among them males 108, and females 102. Vaccine-preventable diseases were found in 23 (1.8%) of children among them males were 11, and females were 12. Syndromic Diseases were found in 4 (0.3%) of children among them males were 2 females were 2. Miscellaneous diseases (Pediculosis, Injuries, Poisoning, and Lymphadenopathy) were diagnosed in 158 (12.4%) children among them males 66 females were 92 (Table 1).

### **The distribution of diseases among the children visited the camp situated at Madarsa Chowk**

A total of 427 children visited Madarsa Chowk camp and 1240 diseases were diagnosed in them. Male children were 222 and female children were 205, among them 11 were new born male children and 7 were female children, 1 month to 5 years male children were 152, and female children were 131, 6 years to 12 years male children were 35 and female children were 42, 13 years to 18 years male children were 24 and female children were 25 (Table 1).

Out of 427 children, 6 (0.5%) of children were suffered from fever, among them males were 3, and females were 3. 104 (8.4%) children diagnosed with respiratory diseases, among them males were 51, and females were 53. 59 (4.8%) children were diagnosed with ophthalmic diseases, among them, males 28, and females were 31 (Table 1).

Gastrointestinal diseases were found in 83 (6.7%) children, among them, males were 37, and females were 46. 26 (2.1%) of children diagnosed with musculoskeletal diseases, among them males were 9, and females were 17, and gynecological diseases were diagnosed in 9 (0.7%) female children. 99 (8.0%) of children were diagnosed with skin diseases, among them, males 49, and females 50. 39 (3.1%) of children have diagnosed with diseases of the nervous system among them males were 20, and females were 19 (Table 1).

Psychiatric disorders were diagnosed in 33 (2.7%) of children among them males were 11, and females were 22. Surgical diseases were diagnosed in 6 (0.5%) of children among them males were 5, and females were 2. Eye Nose Throat (ENT) diseases were diagnosed in 45 (3.6%), of children among them males were 27, and females were 18. Nephrological diseases were diagnosed in 11 (0.9%), of children among them males were 5, and



females were 6. Cardiovascular disease was diagnosed in 10 (0.8%), of children among them males 4, and females 6 (Table 1).

Endocrinological diseases were found in 16 (1.3%) of children among them males and 7 females were 9. Hematological diseases were found in 217 (17.5%) children among them males and 110 females were 107. Dental diseases were diagnosed in 56 (4.5%) of children among them males were 25 females were 31. Neonatal diseases were diagnosed in 39 (3.1%) of children among them males 22 females were 17 (Table 1).

Nutrition deficiencies such as stunting, wasting, and both were diagnosed in 244 (19.7%) children among them males were 118, and females were 126. Vaccine-preventable diseases were found in 14 (1.1%) of children among them males were 6, and females were 8. Syndromic diseases were found in 2 (0.2%) of children among them males were 2 females were 0.

Miscellaneous diseases (Pediculosis, Injuries, Poisoning, and Lym phadeno pathy) were diagnosed in 122 (9.8%) children among them males were 50 females were 72 (Table 1).

The distribution of diseases among the children who visited the camp situated at Neem Chowk, and Sumera were described in Table 2.

Table 2: Distribution of Diseases in Muzaffarpur’s Children in the Neem Chowk and Sumera

Diseases	Neem Chowk - Camp – 3 (No of Children=322) (No of Diseases=1179)	Sumera - Camp- 4 (No of Children=367) (No of Diseases=1161)
Fever without focus	5(0.4)	7(0.6)
Respiratory Diseases	75(6.4)	89(7.7)
Ophthalmic Diseases	59(5.0)	63(5.4)
Gastrointestinal Diseases	74(6.3)	113(9.7)
Musculoskeletal	22(1.9)	21(1.8)

Diseases		
Gynecological Diseases	7(0.6)	3(0.3)
Skin Diseases	100(8.5)	77(6.6)
Diseases of the Nervous System	33(2.8)	31(2.7)
Psychiatric Disorders	26(2.2)	33(2.8)
Surgical Diseases	7(0.6)	4(0.3)
ENT Diseases	57(4.8)	50(4.3)
Nephrological Diseases	15(1.3)	12(1.0)
Cardiovascular Disease	9(0.8)	16(1.4)
Endocrinological Diseases	16 (1.4)	17(1.5)
Heamatological Diseases	164(13.9)	159(13.8)
Dental Diseases	80(6.8)	63(5.4)
Neonatal Diseases	37(3.1)	36(3.1)
Nutrition Deficiencies	280(23.7)	253(21.8)
Vaccine-Preventable Diseases	16(1.3)	18(1.6)
Syndromic Disorders	4(0.3)	4(0.3)
Miscellaneous Diseases	93 (7.9)	92(7.9)

The distribution of diseases among the children visited the camp situated at Neem Chowk

A total of 322 children visited Neem Chowk camp and 1179 diseases were diagnosed in them. Male children were 177 and female children were 145, among them 6 were newborn male children and 10 were female children, 1 month to 5 years male children were 119, and female children were 92, 6 years to 12 years male children were 23 and female children were 26, 13 years to 18 years male children were 29 and female children were 17 (Table 2).

Out of 322 children, 5 (0.4%) of children were suffered from fever, among them males were 4, and females were 1. 75 (6.4%) children diagnosed with respiratory diseases, among them males were 41, and females were 34. 59 (5.0%) children were diagnosed with ophthalmic diseases, among them, males 30, and females 29 (Table 2).

Gastrointestinal diseases were found in 74 (6.3%) children, among them, males were 34, and females were 40. 22 (1.9%) of children diagnosed with musculoskeletal diseases, among them males were 11, and females were 11, and gynecological diseases were diagnosed in 7 (0.6%) female children. 100 (8.5%) of children were diagnosed with skin diseases, among them, males were 46, and females 54. 33 (2.8%) of children have been diagnosed with diseases of the nervous system among them males were 15, and females 18 (Table 2).

Psychiatric disorders were diagnosed in 26 (2.2%) of children among them males were 9, and females were 17. Surgical diseases were diagnosed in 7 (0.6%) of children among them males were 4, and females were 3. Eye Nose Throat (ENT) diseases were diagnosed in 57 (4.8%), of children among them males were 30, and females were 27. Nephrological diseases were diagnosed in 15 (1.3%), children among them males 7, and females 8. Cardiovascular disease was diagnosed in 09 (0.8%), children among them males were 4, females were 5 (Table 2).

Endocrinological diseases were found in 16 (1.4%) of children among them males were 6 females 10. Hematological diseases were found in 164 (13.9%) children among them males were 70 females were 94. Dental diseases were diagnosed in 80 (6.8%) of children among them males 36 females were 44. Neonatal diseases were diagnosed in 37 (3.1%) of children among them males 14 females 23 (Table 2).

Nutrition deficiencies were diagnosed in 75 (5.9%) of children among them males were 34 females 41. Vaccine-preventable diseases were found in 16 (1.8%) of children among them males were 9 females were 7. Syndromic diseases were found in 4 (0.3%) of children among them males were 1 female were 3. Miscellaneous diseases (Pediculosis, Injuries, Poisoning, and Lym

phadenopathy) were diagnosed in 93 (7.9%) of children among them males and 49 females were 44 (Table 2).

The distribution of diseases among the children who visited the camp situated at Sumera

A total of 367 children visited the Sumera camp and 1161 diseases were diagnosed in them. Male children were 367 and female children were 204, among them 9 were newborn male children and 9 were female children, 1 month to 5 years male children were 141, and female children were 99, 6 years to 12 years male children were 31 and female children were 27, 13 years to 18 years male children were 23 and female children were 28 (Table 2).

Out of 367 children, 7 (0.6%) of children were suffered from fever, among them males were 3, and females were 4.89 (7.7%) children diagnosed with respiratory diseases, among them males were 45, and females were 44.63 (5.4%) children were diagnosed with ophthalmic diseases, among them, males 30, and females 33 (Table 2).

Gastrointestinal diseases were diagnosed in 113 (9.7%) children, among them, males were 50, and females were 63. 21 (1.8%) of children diagnosed with musculoskeletal diseases, among them males were 13 and females were 8, and gynecological diseases were diagnosed in 3 (0.3%) female children. 77 (6.6%) of children were diagnosed with skin diseases, among them, males were 34, and females were 43. 31 (2.7%) of children were diagnosed with diseases of the nervous system among them males were 16, and females were 15 (Table 2).

Psychiatric disorders were diagnosed in 33 (2.8%) of children among them males were 9, and females were 24. Surgical diseases were diagnosed in 4 (0.3%) of children among them males were 3, and females were 1. Eye Nose Throat (ENT) diseases were diagnosed in 50 (4.3%), of children among them males were 28, and females were

22. Nephrological diseases were diagnosed in 12 (1.0%), of children among them males were 5, and females were 7.

Cardio vascular disease was diagnosed in 16 (1.4%), children among them males were 10, females 6 (Table 2).

Endocrinological diseases were found in 17 (1.5%) of children among them males were 8 females were 9.

Hematological diseases were found in 159 (13.8%) children among them males 75 females were 84.

Dental diseases were diagnosed in 63 (5.4%) of children among them males were 34 females were 29.

Neonatal diseases were diagnosed in 36 (3.1%) of children among them males were 18 females were 18 (Table 2).

Nutrition deficiencies were diagnosed in 253 (21.8%) of children among them males 123 females were 130.

Vaccine-Preventable Diseases were found in 18 (1.6%) of children among them males and 5 females were 13.

Syndromic Diseases were found in 4 (0.3%) of children among them males were 1 female were 3.

Miscellaneous Diseases (Pediculosis, Injuries, Poisoning, and Lym phadenopathy) were diagnosed in 92 (7.9%) of children among them males and 56 females were 36 (Table 2).

The distribution of diseases among the children who visited the camp situated at Dumarikatra and Aurai was described in Table 3.

Table 3: Distribution of Diseases in Muzaffarpur’s Children in the Dumarikatra and Aurai

Table 3: Distribution of Diseases in Muzaffarpur’s Children in the Dumarikatra and Aurai

Diseases	Dumarikatra - Camp- 5 (No of Children = 289) (No of Diseases = 1035)	Aurai- Camp – 6 (No of Children=416) (No of Diseases=1327)
Fever without focus	3(0.3)	4(0.3)
Respiratory Diseases	85(8.2)	101(7.6)
Ophthalmic Diseases	50(4.8)	60(4.5)

Gastrointestinal Diseases	101(9.8)	85(6.4)
Musculoskeletal Diseases	16(1.5)	20(1.5)
Gynecological Diseases	11(1.1)	16(1.2)
Skin Diseases	89(8.6)	85(6.4)
Diseases of the Nervous System	41(4.0)	47(3.5)
Psychiatric Disorders	37(3.6)	37(2.8)
Surgical Diseases	6(0.6)	6(0.5)
ENT Diseases	52(5.0)	65(4.9)
Nephrological Diseases	17(1.6)	15(1.1)
Cardiovascular Disease	12(1.2)	20(1.5)
Endocrinological Diseases	18(1.7)	20(1.5)
Heamatological Diseases	164(15.8)	206(15.5)
Dental Diseases	44(4.3)	41(3.1)
Neonatal Diseases	34(3.3)	36(2.7)
Nutrition Deficiencies	188(18.2)	313(23.7)
Vaccine-Preventable Diseases	16(1.5)	15(1.1)
Syndromic Disorders	1(0.1)	1(0.1)
Miscellaneous Diseases	50(4.8)	134(10.1)

**The distribution of diseases among the children who visited the camp situated at Dumarikatra**

A total of 289 children visited **Dumarikatra** camp and 1035 diseases were diagnosed in them. Male children were 165 and female children were 124, among them 7 were newborn male children and 6 were female children, 1 month to 5 years male children were 113, and female children were 86, 6 years to 12 years male children were 34 and female children were 19, 13 years to 18 years male children were 11 and female children were 13 (Table 3).

Out of 289 children, 3 (0.3%) children were suffered from fever, among them males were 2, and females were 1. 85 (8.2%) children diagnosed with respiratory diseases, among them males were 47, and females were 38. 50 (4.8%) children were diagnosed with ophthalmic diseases, among them, males 25, and females 25 (Table 3).

Gastrointestinal diseases were found in 101 (9.8%) children, among them, males were 44, and females 57. 16 (1.5%) of children diagnosed with musculoskeletal diseases, among them males were 9, and females were 7, and gynecological diseases were diagnosed in 11 (1.1%) female children. 89 (8.6%) of children were diagnosed with skin diseases, among them, males 45, and females 44. 41 (4.0%) of children have diagnosed with diseases of the nervous system among them males were 21, and females were 20 (Table 3).

Psychiatric disorders were diagnosed in 37 (3.6%) of children among them males were 15, and females were 22. Surgical diseases were diagnosed in 6 (0.6%) of children among them males were 5, and females were 1. Eye Nose Throat (ENT) diseases were diagnosed in 52 (5.0%), of children among them males 27, and females 25. Nephrological diseases were diagnosed in 17 (1.6%), children among them males 8, and females 9. Cardiovascular disease was diagnosed in 12 (1.2%), children among them males 6, and females 6 (Table 3).

Endocrinological diseases were found in 18 (1.7%) of children among them males were 9 females were 9. Hematological diseases were found in 164 (15.8%) children among them males and 58 females were 106. Dental diseases were diagnosed in 44 (4.3%) of children among them males were 21 females were 23. Neonatal diseases were diagnosed in 34 (3.3%) of children among them males were 18 females were 16 (Table 3).

Nutrition deficiencies were diagnosed in 188 (18.2%) of children among them males 92 females were 96. Vaccine-Preventable diseases were found in 16 (1.5%) of children among them males and 5 females were 11. Syndromic diseases were found in 1 (0.1%) of children among them males were 1 females 0. Miscellaneous diseases (Pediculosis, Injuries, Poisoning, and Lympha

deno pathy) were diagnosed in 50 (4.8%) of children among them males 27 females were 23 (Table 3).

### **The distribution of diseases among the children who visited the camp situated at Aurai**

A total of 416 children visited the Aurai camp and 1327 diseases were diagnosed in them. Male children were 219 and female children were 197, among them 11 were newborn male children and 7 were female children, 1 month to 5 years male children were 141, and female children were 109, 6 years to 12 years male children were 47 and female children were 56, 13 years to 18 years male children were 20 and female children were 25 (Table 3).

Out of 416 children, 4 (0.3%) children were suffered from fever, among them males were 2, and females were 2. 101 (7.6%) children diagnosed with respiratory diseases, among them males were 53, and females were 48. 60 (4.5%) children were diagnosed with ophthalmic diseases, among them males were 31, and females were 29 (Table 3).

85 (6.4%) children were diagnosed with gastrointestinal diseases, among them, males were 33, and females were 52. 20 (1.5%) of children diagnosed with musculoskeletal diseases, among them males were 11, and females were 9, and gynecological diseases were diagnosed in 16 (1.2%) female children. 85 (6.4%) of children were diagnosed with skin diseases, among them, males were 35, and females 50. 47 (3.5%) of children were diagnosed with diseases of the nervous system among them males 21, and females 26 (Table 3).

Psychiatric disorders were diagnosed in 37 (2.8%) of children among them males were 15, and females were 22. Surgical diseases were diagnosed in 6 (0.5%) of children among them males were 4, and females were 2. Eye Nose Throat (ENT) diseases were diagnosed in 65 (4.9%), of children among them males were 33, females

were 32. Nephrological diseases were diagnosed in 15 (1.1%), children among them males 6, and females 9. Cardiovascular disease was diagnosed in 20 (1.5%), children among them males 13, and females 7 (Table 3). Endocrinological diseases were found in 20 (1.5%) of children among them males 8 females 12. Hematological diseases were found in 206 (15.5%) children among them males and 127 females were 79. Dental diseases were diagnosed in 41 (3.1%) of children among them males 22 females were 19. Neonatal diseases were diagnosed in 36 (2.7%) of children among them males 20 females were 16 (Table 3).

Nutrition deficiencies were diagnosed in 313 (23.7%) children among them males and 151 females were 162. Vaccine-preventable diseases were found in 15 (1.1%) of children among them males were 7 females were 8. Syndromic diseases were found in 1 (0.1%) of children among them males were 0 females were 1. Miscellaneous diseases (Pediculosis, Injuries, Poisoning, and Lympha deno pathy) were diagnosed in 134 (10.1%) children among them males, and 59 females were 75 (Table 3).

The distribution of diseases among the children who visited the camp situated at Ababakarpur and Seetamani was described in Table 4.

Table 4: Distribution of Diseases in Muzaffarpur’s Children in the Ababakarpur and Seetamani

Diseases	Ababakarpur - Camp – 7 (No of Children=403) (No of Diseases=1495)	Seetamani Camp – 8 (No of Children=298) (No of Diseases=873)
Fever without focus	7(0.5)	3(0.3)
Respiratory Diseases	113(7.6)	72(8.2)
Ophthalmic Diseases	76(5.1)	48(5.5)
Gastrointestinal Diseases	95(6.4)	59(6.8)
Musculoskeletal Diseases	21(1.4)	12(1.4)

Gynecological Diseases	19(1.3)	3(0.3)
Skin Diseases	120(8.0)	45(5.2)
Diseases of the Nervous System	54(3.6)	26(3.0)
Psychiatric Disorders	38(2.5)	24(2.7)
Surgical Diseases	9(0.6)	6(0.7)
ENT Diseases	67(4.5)	32(3.7)
Nephrological Diseases	11(0.7)	11(1.3)
Cardiovascular Disease	17(1.1)	7(0.8)
Endocrinological Diseases	24(1.6)	16(1.8)
Heamatological Diseases	251(16.9)	142(16.3)
Dental Diseases	63(4.1)	33(3.8)
Neonatal Diseases	31(2.1)	30(3.4)
Nutrition Deficiencies	307(20.5)	223(25.5)
Vaccine-Preventable diseases	16(1.1)	13(1.5)
Syndromic Disorders	6(0.4)	0(0.0)
Miscellaneous Diseases	150(10.0)	68(7.8)

**The distribution of diseases among the children who visited the camp situated at Ababakarpur**

A total of 403 children visited Ababakarpur camp and 1495 diseases were diagnosed in them. Male children were 214 and female children were 189, among them 9 were newborn male children and 6 were female children, 1 month to 5 years male children were 139, and female children were 105, 6 years to 12 years male children were 45 and female children were 52, 13 years to 18 years male children were 21 and female children were 26 (Table 4).

Out of 403 children, 7 (0.5%) of children suffered from fever, among them, males were 5, and females were 2. Of 113 (7.6%) children diagnosed with respiratory diseases, among them, males were 63, and females were 50. 76 (5.1%) children were diagnosed with ophthalmic diseases, among them, males were 37, and females 39 (Table 4).

Gastrointestinal diseases were found in 95 (6.4%) children, among them, males 45, and females 50. 21



(1.4%) of children diagnosed with musculoskeletal diseases, among them males were 8, and females were 13, and gynecological diseases were diagnosed in 19 (1.3%) female children. 120 (8.0%) of children were diagnosed with skin diseases, among them, males 55, and females 65. 54 (3.6%) of children have diagnosed with diseases of the nervous system among them males were 22, and females were 32 (Table 4).

Psychiatric disorders were diagnosed in 38 (2.5%) of children among them males were 15, and females were 23. Surgical diseases were diagnosed in 9 (0.6%) of children among them males were 8, and females were 1. Eye Nose Throat (ENT) diseases were diagnosed in 67 (4.5%), of children among them males were 36, females were 31. Nephrological diseases were diagnosed in 11 (0.7%), of children among them males were 3, and females were 8. Cardiovascular disease was diagnosed in 17 (1.1%), children among them males were 10, females 7 (Table 4).

Endo crino logical diseases were found in 24 (1.6%) of children among them males 11 females were 13. Heama to logical diseases were found in 251 (16.9%) children among them males and 115 females were 136. Dental diseases were diagnosed in 63 (4.1%) of children among them males 26 females were 37. Neonatal diseases were diagnosed in 31 (2.1%) of children among them males 18 females 13 (Table 4).

Nutrition deficiencies were diagnosed in 307 (20.5%) children among them males and 149 females were 158. Vaccine-preventable diseases were found in 23 (1.8%) of children among them males 11 females were 12. Syndromic diseases were found in 6 (0.4%) of children among them males were 3 females were 3. Miscellaneous diseases (Pediculosis, Injuries, Poisoning, and Lym phadeno pathy) were diagnosed in 150 (10.0%) children among them males and 61 females 89 (Table 4).

### **The distribution of diseases among the children who visited the camp situated at Seetamani**

A total of 298 children visited the Seetamani camp and 873 diseases were diagnosed in them. Male children were 163 and female children were 135, among them 4 were newborn male children and 8 were female children, 1 month to 5 years male children were 104, and female children were 88, 6 years to 12 years male children were 37 and female children were 24, 13 years to 18 years male children were 18 and female children were 15 (Table 4).

Out of 298 children, 3 (0.3%) children were suffered from fever, among them males were 2, and females were 1. 72 (8.2%) children diagnosed with respiratory diseases, among them males were 39, and females were 33. 48 (5.5%) children were diagnosed with ophthalmic diseases, among them, males 26, and females were 22 (Table 4).

59 (6.8%) children were diagnosed with gastrointestinal diseases, among them, males were 29, and females were 30. 12 (1.4%) of children diagnosed with musculoskeletal diseases, among them males were 5, and females were 7, and gynecological diseases were diagnosed in 3 (0.3%) female children.

45 (5.2%) of children were diagnosed with skin diseases, among them, males were 23, and females were 27. 26 (3.0%) of children were diagnosed with diseases of the nervous system among them males 15, and females 11 (Table 4).

Psychiatric disorders were diagnosed in 24 (2.7%) of children among them males were 9, and females were 15. Surgical diseases were diagnosed in 6 (0.7%) of children among them males were 6, and females were 0. Eye Nose Throat (ENT) diseases were diagnosed in 32 (3.7%), children among them males 15, and females 17. Nephro logical diseases were diagnosed in 11 (1.3%), of children



among them males were 3, and females were 8. Cardiovascular disease was diagnosed in 7 (0.8%), children among them males were 4, females were 3 (Table 4).

Endocrinological diseases were found in 16 (1.8%) of children among them males and 7 females were 9. Hematological diseases were found in 142 (16.3%) children among them males and 66 females were 76. Dental diseases were diagnosed in 33 (3.8%) of children among them males 22 females were 11. Neonatal diseases were diagnosed in 30 (3.4%) of children among them males 11 females 19 (Table 4).

Nutrition deficiencies were diagnosed in 223 (25.5%) children among them males and 94 females were 129. Vaccine-Preventable Diseases were found in 14 (1.1%) of children among them males were 6 females were 8. Syndromic Diseases were found in 0 (0.0%) of children among them males were 0 females were 0. Miscellaneous Diseases (Pediculosis, Injuries, Poisoning, and Lymphadenopathy) were diagnosed in 68 (7.8%) of children among them males 28 females were 40 (Table 4).

To identify the statistical significance of diseases distributed among the camps was also analyzed and tabulated in Table 5.

**Table 5: Distribution of Diseases in Muzaffarpur’s Children with Statistical Significance**

Diseases	DamodarpurCamp – 1 (n=324)	Madarsa Chowk Camp – 2 (n=427)	Neem Chowk Camp – 3 (n=322)	Sumera Camp- 4 (n=367)	Dumarikatra Camp – 5 (n=289)	Aurai Camp – 6 (n=416)	Ababakarpur Camp – 7 (n=403)	Seetaman i Camp – 8 (n=298)	Chi-square	P-value
Fever without focus	7 (0.5)	6 (0.5)	5 (0.4)	7 (0.6)	3 (0.3)	4 (0.3)	7 (0.5)	3 (0.3)	3.3201	0.865
Respiratory Diseases	94 (7.4)	104 (8.4)	75 (6.4)	89 (7.7)	85 (8.2)	101 (7.6)	113 (7.6)	72 (8.2)	7.6818	0.3615
Ophthalmic Diseases	62 (4.9)	59 (4.8)	59 (5.0)	63 (5.4)	50 (4.8)	60 (4.5)	76 (5.1)	48 (5.5)	7.6206	0.3672
Gastrointestinal Diseases	95 (7.5)	83 (6.7)	74 (6.3)	113 (9.7)	101 (9.8)	85 (6.4)	95 (6.4)	59 (6.8)	42.3327	4.4865
Musculoskeletal Diseases	20 (1.6)	26 (2.1)	22 (1.9)	21 (1.8)	16 (1.5)	20 (1.5)	21 (1.4)	12 (1.4)	3.3509	0.8508
Gynecology Diseases	4 (0.3)	9 (0.7)	7 (0.6)	3 (0.3)	11 (1.1)	16 (1.2)	19 (1.3)	3 (0.3)	22.4800	0.0021*
Skin Diseases	83 (6.5)	99 (8.0)	100 (8.5)	77 (6.6)	89 (8.6)	85 (6.4)	120 (8.0)	45 (5.2)	40.7394	9.0842
Diseases of the Nervous System	55 (4.3)	39 (3.1)	33 (2.8)	31 (2.7)	41 (4.0)	47 (3.5)	54 (3.6)	26 (3.0)	21.5690	0.0030*
Psychiatric Disorders	33 (2.6)	33 (2.7)	26 (2.2)	33 (2.8)	37 (3.6)	37 (2.8)	38 (2.5)	24 (2.7)	7.0392	0.4248
Surgical Diseases	7 (0.5)	6 (0.5)	7 (0.6)	4 (0.3)	6 (0.6)	6 (0.5)	9 (0.6)	6 (0.7)	2.8584	0.879
ENT Diseases	72 (5.7)	45 (3.6)	57 (4.8)	50 (4.3)	52 (5.0)	65 (4.9)	67 (4.5)	32 (3.7)	28.3624	0.0002*
Nephrological Diseases	10 (0.7)	11 (0.9)	15 (1.3)	12 (1.0)	17 (1.6)	15 (1.1)	11 (0.7)	11 (1.3)	7.9478	0.3372

Cardiovascular Disease	15 (1.2)	10 (0.8)	9 (0.8)	16 (1.4)	12 (1.2)	20 (1.5)	17 (1.1)	7 (0.8)	7.5603	0.3730
Endocrinological Diseases	17 (1.3)	16 (1.3)	16 (1.4)	17 (1.5)	18 (1.7)	20 (1.5)	24 (1.6)	16 (1.8)	3.3094	0.8550
Hematological Diseases	184 (14.4)	217 (17.5)	164 (13.9)	159 (13.8)	164 (15.8)	206 (15.5)	251 (16.9)	142 (16.3)	37.3420	0.0001*
Dental Diseases	75 (5.9)	56 (4.5)	80 (6.8)	63 (5.4)	44 (4.3)	41 (3.1)	63 (4.1)	33 (3.8)	51.3442	7.861
Neonatal Diseases	47 (3.7)	39 (3.1)	37 (3.1)	36 (3.1)	34 (3.3)	36 (2.7)	31 (2.1)	30 (3.4)	12.3778	0.0888
Nutrition Deficiencies	210 (16.5)	244 (19.7)	280 (23.7)	253 (21.8)	188 (18.2)	313 (23.7)	307 (20.5)	223 (25.5)	102.1078	0.0001*
Vaccine-Preventable Diseases	23 (1.8)	14 (1.1)	16 (1.3)	18 (1.6)	16 (1.5)	15 (1.1)	16 (1.1)	13 (1.5)	8.3979	0.2988
Syndromic Disorders	4 (0.3)	2 (0.2)	4 (0.3)	4 (0.3)	1 (0.1)	1 (0.1)	6 (0.4)	0 (0.0)	10.0604	0.153
Miscellaneous Diseases	158 (12.4)	122 (9.8)	93 (7.9)	92 (7.9)	50 (4.8)	134 (10.1)	150 (10.0)	68 (7.8)	98.5218	0.0001*

**\* Statistically Significant**

A total of 2846 children were visited at 8 camps (Damodarpur, Madarsa Chowk, Neem Chowk, Sumera, Dumarikatra, Aurai, Ababakarpur, Seetamani) and a total of 9585 diseases were diagnosed. Children were suffered from fever in all the 8 camps were 42; children diagnosed with respiratory diseases were 733, ophthalmic diseases were diagnosed 477, gastro intestinal diseases were diagnosed in 705 children, musculoskeletal diseases were diagnosed in 158 children, gynecological diseases were diagnosed in 72 girl children with statistical significance of (Chi-square – 22.4800, p-value<0.0021) (Table 5).

Skin diseases were diagnosed in 698 children, and diseases of the nervous system were diagnosed in 326 children with a statistical significance of (Chi-square – 21.5690, p-value<0.0030). Psychiatric disorders were found in 261 children, surgical diseases were found in 51 children, and ENT diseases were diagnosed in 440 children with a statistical significance of (Chi-square – 28.3624, p-value<0.0002).

Nephrological diseases were diagnosed in 102 children; cardiovascular diseases were diagnosed in 106 children, endocrinological diseases were diagnosed in 144 children, and hematological diseases were diagnosed in 1487 children with statistical significance of (Chi-square – 37.3420, p-value<0.0001).

Dental diseases were diagnosed in 455 children; neonatal diseases were diagnosed in 290 children, nutrition deficiencies were diagnosed in 2018 children with statistical significance of (Chi-square – 102.1078, p-value <0.0001), vaccine-preventable diseases were diagnosed in 131 children, syndromic disorders were found in 22 children, and miscellaneous diseases such as Pediculosis (head lice), Injuries, Poisoning, and Lymphadenopathy were diagnosed in 867 children with statistical significance of (Chi-square – 98.5218, p-value<0.0001).

**Discussion**

Despite the global vaccination of children for several diseases, diseases in children are still leading them toward mortality. Demir, H et al<sup>56</sup> reported that 35% of

their study children were diagnosed with fever without source, but in our present study, we found in 3 camps  $\leq 0.3\%$  of children were fever without source, and in the rest of the 5 camps the percentage was  $>0.3$  to  $<0.7\%$ .

Samoo, U et al<sup>57</sup> reported that the URTI in children was recorded in boys the percentage was 62.5%, and in girls, the percentage was 37.5%, and in our present study found in 5 camps  $<8\%$  of children were diagnosed with respiratory diseases such as URTI, LRTI, and bronchial asthma in 3 camps,  $>8\%$  of the children were diagnosed with respiratory diseases.

Jandan, N. A et al<sup>58</sup> reports in the study conducted on children aged 5-15, out of 18.8% of children tested for ophthalmic testing, 12.7% of children had conjunctivitis, in our present study we found ophthalmic diseases such as cataracts, visual acuity, strabismus, and conjunctivitis/eye discharge were  $>5\%$  in the 4 camp's children and  $>5<6\%$  in the 4 camps of children were diagnosed with ophthalmic diseases.

Sdravou, K et al<sup>59</sup> tabulated data of diseases of Gastro esophageal Reflux in 9.95 of the study children and celiac diseases in 2.15 of the children, our study is compatible with Sdravou, K et al, and in this present study the gastro intestinal diseases such as Abdominal pain, helminthiasis, ADD, hepatitis, enteric fever, liver diseases in 2 camps were  $> 9\%$  of children were diagnosed, and other 6 camps  $<9\%$  of gastrointestinal diseases were diagnosed in our study children.

Rosenfeld, S. B et al<sup>60</sup> reported that in the United States, the high economic burden is for diseases such as musculoskeletal disease for children, around 13% for pain, and 9% for deformity issues, and the cost of expenditure was 7.6 billion dollars, in our present study, we found only in 1 camp's children had  $>2\%$  of musculoskeletal disease, and rest of 7 camps children were diagnosed with  $<2\%$  of musculoskeletal disease.

Schneider, I. Set al<sup>61</sup> reported that gynecological inflammatory diseases were found in 59% of their study patients, 21% were diagnosed with uterine torsion, 11% were with apoplexy, and 9% of children were diagnosed with ovarian cysts, in our study, we found gynecological diseases were diagnosed in children of 3 camps were  $>1\%$ , and in 5 camps children,  $<1\%$  of gynecological diseases were diagnosed.

Marks, Met al<sup>62</sup> tabulated that 45% of the children of Aboriginal Australian were diagnosed with impetigo skin diseases, in our study in 4 camps of children,  $\geq 8\%$  of skin diseases such as Eczema, scabies, impetigo, and fungal infection were diagnosed, and in rest of the 4 camps  $<8\%$  of skin diseases were diagnosed in our study children.

Phi, D. L et al<sup>63</sup> reported in their study conducted in Vietnam children 2.2% of the children had CNS diseases such as stiff neck in 45% of children, we are study found Diseases of the Nervous System such as febrile seizure, encephalitis, cerebral palsy were diagnosed in  $\leq 3\%$  in 3 camp's children, and  $>3\%$  in the other 5 camps children.

Published data by Pak poor, J et al<sup>64</sup> showed Psychotic disorders were diagnosed in 4% of the children, in our present study, we diagnosed in 7 camps' children  $<3\%$  of psychotic disorders such as mental disorders, autism, and continuous, frequent headache, and in only 1 camp we found  $>3\%$  of children were diagnosed with psychotic disorders.

Research by Greenberg, J. H et al<sup>65</sup> conducted on 3600 children showed 17.5% of children received dialysis for surgical cardiac repair surgery, among them 12.4% of children had hypertension. Our study reported surgical diseases like a lump, hydrocoele, hernia, and rectal mass in children were  $\leq 0.5\%$  in 4 camps, and 4 camps, it was  $>0.6\%$ .

Exploration by van Beeck Calkoen et al<sup>66</sup> reported that in children  $< 1$  year, the sensorineural loss of hearing is

found 67%, among them gene variant was 26%, and the temporal bone anomaly was 27%, we in our present study we found ENT diseases such as otitis media, sinusitis, sensorineural loss of hearing, wax, nasal septum deviated, tonsillitis, cleft lip and palate, nasal polyp, and epistaxis were 4% in 2 camp's children, and in 6 camp's children, the ENT diseases were >4.1% to <5.7% with statistical significance of (Chi-square – 28.3624, p-value < 0.0002).

The research article by Obiagwu, P et al<sup>67</sup> showed the pediatric pattern of kidney diseases was nephritic syndrome in 33.6% of children, glomerulonephritis in 25.8% of the children, kidney diseases in 13.9%, ectopic kidney in 4.9% of the children. We found in our study, that nephrological diseases such as UTI, renal calculus, CKD, and nephritic syndrome were in 4 camp's children ≤1.0%, and in 4 camp children, the nephrological diseases were >1.1%.

Chowdhury, F et al<sup>68</sup> studies conducted in 60 children from 6 months- 60 months showed all the CHD children were underweight, among them 16.7% were severely underweight and 23.35 were moderately underweight. The study also reported that cyanotic CHD children were showing 83.3% stunting. We found that cardiovascular diseases such as cyanotic and cyanotic CHD, hypertension, ARhF, and IE were in 3 camp's children ≤1.0%, and in the rest of the 5 camp's children the cardiovascular diseases were >1.0%.

One of the endocrinological diseases in children is Gynaecomastia, Celebi Bitkin, E et al<sup>69</sup> report pubertal gynecomastia was in 83.75 of the children, and pathological gynecomastia was found in 16.25 of the children, in our present study we reported endocrinological diseases such as diabetes, gynecomastia, hypothyroidism, hyperthyroidism, growth hormone deficiency,

rickets, and hypogonadism around <2% of our study children diagnosed with endocrinological diseases.

Biswas, B et al<sup>70</sup> study shows 56.5% of their study population were thalassemia children, among them 61.3% had palpable spleen, 63.7% received a transfusion of blood at least once a month, 35.4% of them were with HB level of 35.4%, and 1/5 of them are with iron chelators. We found Haematological diseases such as thalassemia, anemia, and hemophilia in 2 camp's children ≤15.0%, and in the rest of the 5 camp's children, Haematological diseases were >15.0% to <17.6% with statistical significance of (Chi-square – 37.3420, p-value < 0.0001).

In children, dental caries are also one of the dental diseases, Abed, R et al<sup>71</sup> report 4.5% of children the age of 5 years suffer from dental caries, 8.8% the 8 years, 2.2% the 12 years, and 0.1% in the 15 years, we found, in 5 camp's children of ≤5.0% suffer with dental diseases such as dental caries, and in the 3 camp's children, the dental caries was >5.1% to 6.8%.

Alken, J et al<sup>72</sup> conducted a study in 992378 infants 50/100000 infants showed extreme hyperbilirubinemia and 6.85 of infants showed hazardous hyperbilirubinemia. Our present study found that total neonatal diseases such as feeding difficulty, uterine growth, abdominal colic, Infantile pustular melanosis, subconjunctival hemorrhages, breast engorgement, vaginal bleeding, cephalhematoma, developmental dysplasia of the hip, seborrheic dermatitis, nappy rash, umbilical hernia, and umbilical granuloma were in <3% in children of 2 camps and 6 camps we found neonatal diseases were in >3 to <4% of children.

Akombi, B. J et al<sup>73</sup> report in their study conducted on 24, 529 Nigerian children aged 0-59 months, and they found severe stunting was found in 29% of the study children, among them 16.4% were in the age group of 0-

23 months, and 36.7% were in the age group of 0-59 months, we in our present study, found nutrient deficient diseases stunting, and wasting were the higher number children are diagnosed with and only in 2 camps of children showed <20%, and rest of the 6 camps children showed >25 to <26% with statistical significance of (Chi-square-102.1078, P-value-<0.0001).

Frenkel, L. D et al<sup>74</sup> describes a stat that by 2018, the total number of children <5 years was 679 million, among them 5.3 million children died due to several causes in 2018, among them 700,000 children died due to vaccine-preventable diseases. In our present study, we found Bordetella pertussis, Measles, Rubella, Chicken Pox, and Mumps were present in  $\leq 1.5\%$  of 3 camps, and in the rest of the 3 camps >1.5% to <1.9% of children with vaccine-preventable diseases.

Donadille, B et al<sup>75</sup> reported that syndromic disorders such as Turner syndrome affect around 50/100000 newborn girls, among them 20-30% were affected by the bicuspid aortic disorder, 7-18% were affected with the tricuspid aortic disorder, and 40% affect with aortic dilation. We found syndromic disorders such as Downs, Turner, and Marfan "s syndrome in 4 camp children  $\leq 0.2\%$ , and in 4 camp children, the syndromic diseases were >1.2 to <0.3%.

Nejati, J et al<sup>76</sup> published data on one of the miscellaneous diseases pediculosis conducted on 2995 students, among them 23.8 % of the students were with pediculosis, and students from the rural area had 12.4% and students from the urban area also had 6.5% of pediculosis, we found miscellaneous diseases such as head lice (Pediculosis), injuries, poisoning, lymphadenopathy were present in  $\leq 8.9\%$  in 6 camps children and rest of 2 camps children, we found >9-10% of miscellaneous diseases with statistical significance of (Chi-square-98.5218, P-value-<0.0001).

WHO<sup>77</sup> and other researchers<sup>78,79</sup> found that malnutrition in children is a disease faced by many children. In India, around 12,000 children were born with (major) diseases every year, and  $\frac{1}{2}$  of them die before their adulthood the reason for malnutrition is the illiteracy of parents and low economic level.

In conclusion, extensive studies were published with children with one specific disease or two, but not published all the possible diseases; our present study reports all the possible diseases (system-based) in children. We found in our present study that a high percentage of our study children were affected with nutrition deficiencies followed by miscellaneous diseases, haematological diseases, ENT diseases, diseases of the nervous system, and Gynecology Diseases.

The stakeholders, child-caring organizations, primary health units, schools, and medical units can initiate the programs on awareness of children's diseases, preventive measures, vaccinations, free health camps, and education to parents.

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