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Cases of Infantile Diarrhea and Gastroenteritis

Camila Carvalho do Vale [a*], Fernanda Lizie Araujo Ferreira [b], Jakeline da Silva Rodrigues [c], Maylane Cristina Barros Sousa [c] and Bruna Rafaela da Silva Sousa [d]

[a] Programa de Pós-Graduação em Enfermagem, Universidade do Estado do Pará e Universidade Federal do Amazonas (PPGENF/UEPA-UFAM). Belém, Pará, Brasil.
[b] Universidade da Amazônia, Unama. Pará, Brasil.
[c] Programa de Pós-Graduação em Enfermagem, Centro Universitário da Amazônia (PPGENF/UNIESAMAZ). Belém, Pará, Brasil.
[d] Programa de Pós-Graduação em Neurociência e Biologia Celular, Universidade Federal do Pará (PPGNBC/UFPA). Belém, Pará, Brasil.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Original Research Article

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ABSTRACT

Objective: To Analyse cases of diarrhea and gastroenteritis in children in the municipality of Ananindeua from 2018 to 2022.
Methods: Quantitative, cross-sectional descriptive epidemiological rearch on a secundary basis. The data are from notified cases of diarrhea and gastroenteritis in children age 0 to 9 yers. Tables and graphs were used to analyze the data.
Results: Between 2018 and 2022, the municipality under study recorded 116 reported cases of diarrhea and gastroenteritis in children. Over these years, the age group most affected was 1 to 4 years old, accounting for 58.69% of all cases. In addition, there is a slightly higher prevalence of

**Corresponding author: Email: maylanecristina11@gmail.com;*

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cases in females compared to males. With regard to the race of the children, the majority of notifications refer to brown children.
Conclusions: This study allowed a detaild analysis of cases of diarrhea and gastroenteritis in children, revealing valuable information about the sociodemographic characteristics of the région studied, as well as the influence of these determinants on the health/disease of these children.

Keywords: Gastroenteritis; diarrhea; health; gastrointestinal infection.

1. INTRODUCTION

Childhood is a crucial stage in a child's development, and health plays a fundamental role in this process. During the early years, children's immune systems are in the process of forming, making them more susceptible to illnesses and diseases. It is vital to understand that illnesses such as diarrhea and gastroenteritis can negatively impact this stage. Based on this understanding, it becomes essential to develop effective strategies to protect children's well-being during this fundamental period of their lives [1].

Gastroenteritis is a widespread gastrointestinal infection characterized by inflammation of the digestive tract and affects individuals of all age groups. However, gastroenteritis in childhood requires special attention due to its clinical complications and significant impact on public health [2].

Despite being treatable, diarrhea persists as a public health problem that particularly affects children, especially in developing regions, and is one of the main causes of hospital visits and admissions [3]. Gastroenteritis and acute diarrheal diseases can have various causes, such as allergies, food intolerances or infection by viruses, bacteria or protozoa. Symptoms include liquid stools, occurring at least three times a day for up to 14 days, which can result in dehydration and even death [4].

Epidemiological data indicates that the nano virus is the leading cause of childhood gastroenteritis globally, with transmission mainly via the fecal-oral route due to poor child hygiene [5]. Although mortality rates from infectious diseases have decreased, acute diarrhea is still a significant cause of morbidity, especially in underdeveloped countries [6]. The implementation of sanitation protocols has reduced waterborne diseases, but foodborne diseases continue to represent a global health challenge. Epidemiology highlights the need for integrated approaches and local studies for more effective interventions [7].

Treatment of diarrhea emphasizes health promotion and prevention, with early diagnosis to reduce hospitalizations and mortality [8]. Management includes treating dehydration, preventing nutritional complications and reducing the duration of the condition. Therapeutic options include oral rehydration serum, a balanced diet and symptomatic medications, with careful consideration given to antibiotic use due to the self-limiting nature of most cases [9]. Treatment is characterized into plans A, B and C, ranging from home care to hospitalization, depending on severity. The WHO highlights preventive measures, including immunization, exclusive breastfeeding, good hygiene practices and sanitation, to eradicate deaths from acute diarrhea by 2030 [10]. Vaccination, such as against rotavirus, has been shown to be effective in reducing severe gastroenteritis in children [11].

Nurses play a vital role in the follow-up of cases of diarrhea and gastroenteritis in childhood, performing clinical assessments to identify symptoms and complications [12]. In addition to clinical management, nurses promote the dissemination of interprofessional care and monitor epidemiologically-based preventive outcomes [13]. This comprehensive, evidence-based approach highlights the crucial role of nurses in reducing the incidence of these conditions in childhood [14].

The analysis of gastroenteritis and diarrhea data makes it possible to identify the most vulnerable population groups, geographical areas with the highest incidence of cases, the most affected age groups and associated risk factors. This provides a solid database for more detailed knowledge about the distribution of cases and areas of higher prevalence, with a view to reducing child morbidity and mortality, as well as reducing the costs associated with these diseases. The aim of this study was to analyze cases of diarrhea and gastroenteritis in children in the municipality of Ananindeua from 2018 to 2022.

2. METHODS

2.1 Design, Period and Setting of the Study

This is a cross-sectional descriptive epidemiological study using secondary data guided by the STROBE tool. It was carried out between January 2018 and December 2022, in the municipality of Ananindeua-PA.

2.2 Population or Sample; Inclusion and Exclusion Criteria

The population consisted of children aged 0 to 9. Inclusion criteria were: all new cases of diarrhea and gastroenteritis reported in the municipality of Ananindeua over a 5-year period. Exclusion criteria were: all cases duplicated in the system, notified incorrectly or data that did not contain all the necessary information to be included.

2.3 Data Collection Procedures

Data was collected from the Notifiable Diseases Information System (SINAN) on all reported cases of diarrhea and gastroenteritis in the municipality under study, using the variables: age group, color/race and sex of the children.

2.4 Plan for Data Analysis

The data was tabulated using Microsoft Excel software, with a descriptive statistical analysis then presented in tables. The results are divided into the following variables: age group, gender and color/race.

3. RESULTS

Between 2018 and 2022, the municipality under study recorded 116 reported cases of diarrhea and gastroenteritis in children. A detailed analysis reveals that, over these years, the age group most affected was 1 to 4 years old, accounting for 58.69% of all cases (68 cases). There was an even distribution in the other age groups. In addition, there was a slightly higher prevalence of cases in females compared to males. With regard to the race of the children, the majority of notifications refer to brown children. However, it is important to note that racial specification in the children notified is limited, as shown in Table 1.

Tables 1. Sociodemographic variables of children affected by diarrhea and gastroenteritis in Ananindeua between 2018 and 2022

Age group	n(%)
0 a 11 months	24 (20,69)
1 a 4 years	68 (58,62)
5 a 9 years	24 (20,69)
Sex	
Feminine	23 (19,83)
Masculine	14 (12,07)
No information	79 (68,10)
Race	
White	2 (1,72)
Black	0
Brown	16 (13,79)
Yellow	0
Indigene	0
No information	97 (84,49)

The distribution by age group showed that in the years 2018 to 2022 the patterns were different in the distribution by age group. Children aged 1 to 4 were the most affected, accounting for 58.62% of total cases, while children under 1 and 5 to 9 were equally distributed (20.69%), as shown in Fig. 1.

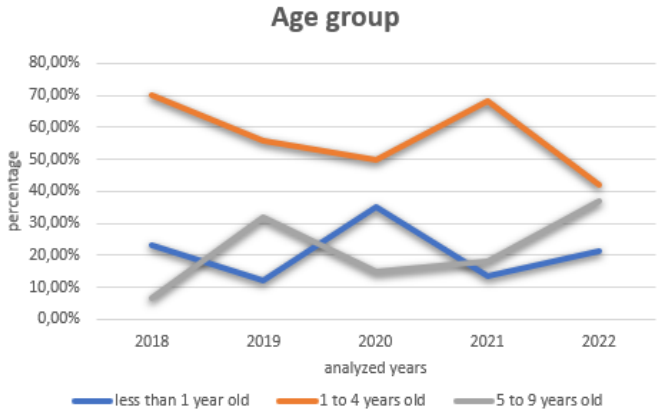

Fig. 1. Distribution by age group of children affected by diarrhea and gastroenteritis in Ananindeua between 2018 and 2022

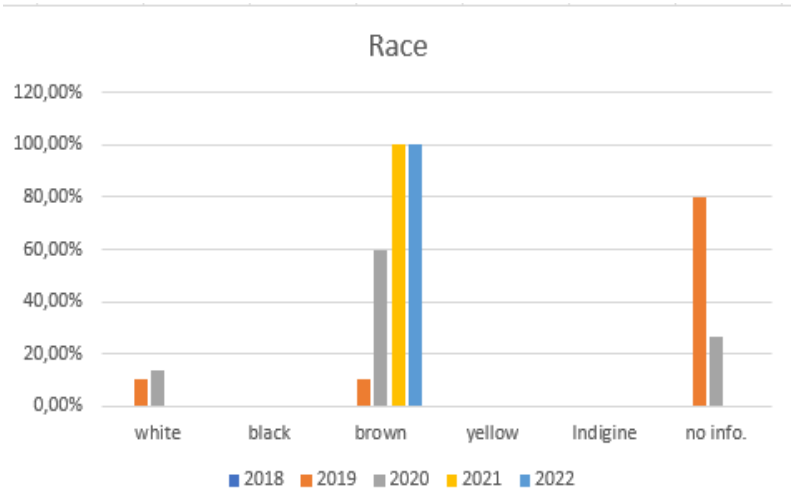

Fig. 2. Distribution by race of children affected by diarrhea and gastroenteritis in Ananindeua between 2018 and 2022

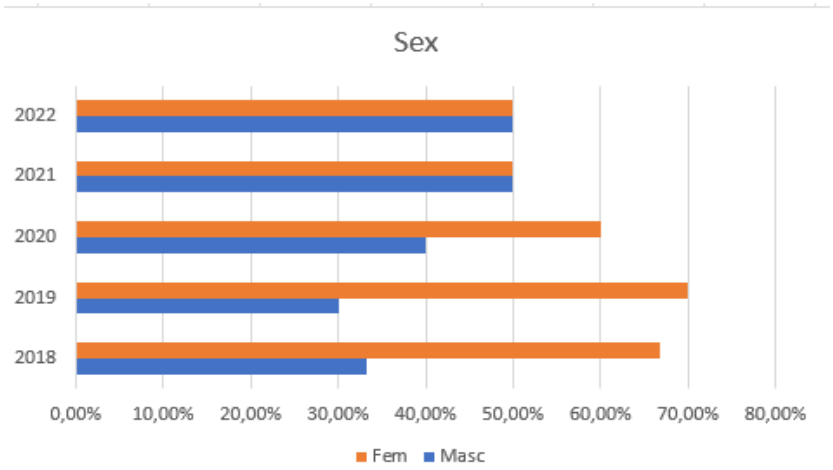

Fig. 3. Distribution by sex of children affected by diarrhea and gastroenteritis in Ananindeua between 2018 and 2022

The data reveals a notable lack of specific notifications. Of the notified cases, only 2 (1.72%) were identified in white children, while 16 (13.79%) cases involved brown children, the rest of the children did not have their race notified, as shown in Fig. 2.

Regarding the sex of the children affected, Fig. 3 shows that the vast majority of cases occurred in female children compared to males during the years 2018 to 2022.

4. DISCUSSION

The analysis of cases of diarrhea and gastroenteritis in children in Ananindeua reveals important patterns that deserve attention. The predominance of these conditions in the 1 to 4 age group highlights the vulnerability of this group, possibly related to the immaturity of the immune system at this crucial stage of child development. This information reinforces the need for preventive strategies aimed at children in this age group [15].

The equal distribution between the sexes, although with a slight female prevalence, suggests that both sexes are susceptible, contrary to some trends that point to a higher incidence in one of the sexes [16].

The results indicate a continuing need for health education, with an emphasis on hygiene practices and preventive care, especially considering the higher prevalence in children aged 1 to 4 [17].

The importance of nursing in the management and prevention of cases of childhood diarrhea and gastroenteritis stands out. Nurses, as direct contact health professionals, play an essential role in early identification, clinical management and dissemination of information on prevention [18].

This study provides a valuable insight into the epidemiological characteristics of these diseases in Ananindeua. There is a need to further explore the underlying causes, taking into account socio-economic and environmental factors specific to the region [19].

In summary, the analysis of cases of childhood diarrhea and gastroenteritis in Ananindeua highlights the importance of targeted preventive strategies, improvement in the collection of demographic data and the continued proactive role of the nursing team in the management of these diseases [20].

4.1 Limitations of the Study

It is essential to recognize some of the limitations inherent in this study. The first is the nature of the data, since it comes from the Notifiable Diseases Information System (SINAN) and is subject to possible underreporting or inconsistencies. The quality of notification can vary between health professionals and institutions, which can influence the accuracy of demographic and clinical information [21].

Another limitation concerns the lack of racial specificity in many notifications, making it difficult to carry out more detailed analyses of ethnic-racial disparities associated with these health conditions. More comprehensive and ethnically sensitive data collection would be essential to better understand the sociodemographic determinants of these diseases [22].

Furthermore, this study did not address the specific underlying causes of childhood diarrhea and gastroenteritis, limiting itself to an epidemiological analysis. Future investigations could explore socioeconomic, environmental and behavioral factors that contribute to the occurrence of these cases, providing more in-depth results to guide preventive interventions [23].

4.2 Contributions to Nursing

Despite its limitations, this study makes significant contributions to the field of nursing. The detailed analysis of cases of diarrhea and gastroenteritis in children highlights the importance of the nurse's role in managing these diseases, from early identification to clinical management and the promotion of preventive practices [24].

The emphasis on the 1-4 age group as the most affected underscores the need for educational and preventive strategies aimed at this specific group. Nurses can play a central role in implementing educational programs in communities and schools, aimed at the adoption of hygiene practices and preventive care [25].

Furthermore, the discussion of the study's limitations highlights the importance of continuous improvement in the collection of demographic health data. Nurses, as active agents in the collection of information, can contribute to improving the accuracy and comprehensiveness of data, enabling more robust analysis and guiding more effective interventions [26].

In summary, this study not only provides valuable insights into cases of diarrhea and gastroenteritis in Ananindeua, but also highlights opportunities to strengthen the role of nursing in the prevention and management of these diseases, promoting child health in a more comprehensive manner [27].

5. CONCLUSIONS

This study allowed for a detailed analysis of cases of diarrhea and gastroenteritis in children, revealing valuable information about sociodemographic characteristics in the region studied, as well as the influence of these determinants on the health/disease of these children. It is necessary to pay attention to the lifestyle of the child population, their diet, their personal hygiene, among other factors that can become aggravating factors for gastrointestinal diseases.

These measures must be integrated, encompassing health education, improved sanitary conditions and access to appropriate health services. Only by adopting an integrated, evidence-based approach will it be possible to reduce the incidence of these diseases in childhood.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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