



## Teachers' Perception of Gastroenteritis among Children in Early Childhood Education Centers in Nsukka Local Government Area, Enugu State

Elizabeth Nkechi Ebizie

Department of Early Childhood and Primary Education, University of Nigeria, Nsukka.

### Abstract

*Gastroenteritis is a main cause of death among children, particularly those below five years old. Gastroenteritis is held responsible for childhood fatalities-mortality. This study, therefore, ascertained teacher's perception of the outbreak of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State. Study adopted the descriptive survey design. The sample size for the study was 100 teachers. Instrument for data collection was titled Perception on Gastroenteritis Questionnaire (PGQ). Data were analyzed using mean and standard deviation. The results obtained showed that teachers had high perception that negligence to rotavirus vaccination, ingestion of contaminated food or water, parents /teacher negligence, poor sanitation, overcrowding and among others. Based on the findings, the author concluded that all stakeholders, parents, education planners, childhood educators, teachers, and governments are urgently called to design implementable policies to prevent gastroenteritis among the children.*

**Keywords:** Teachers' perception, Gastroenteritis, Children, Early childhood centres

### Introduction

Early childhood education centers are establishments that offer developmental and educational services to young children, usually between the ages of one and five. In a caring, transparent, and secure setting, these centers hope to foster learning, intelligent curiosity, creativity, freedom, social skills, and physical development (Day, 2021). Through play and exploration, the curriculum, which is focused on the needs, talents, interests, and abilities of the children, helps them to think critically, examine issues, and draw logical conclusions (Federal Republic of Nigeria, 2014). According to Goagoses et al. (2024), effective early childhood education centers addresses specific design environment to create a secure, entertaining, and educational setting rather than being smaller replicas of primary schools. To add to this, the centers are made to provide a safety and foster holistic care while their parents are not available. Furthermore, due to a variety of environmental and social dynamics-related factors, children enrolled in early childhood education centers are at an increased risk of contracting diseases. The centers usually house a large number of children, which could lead to the spread of diseases through direct touch or indirect channels like shared surfaces, toys among others (Fong et al., 2020). Ji and Ye (2024) further emphasized that there is a decreased number of personnel in the centers when it comes to basic hygiene practices like washing their hands and that of the children as well among others.

Additionally, the varied areas found in early childhood facilities may contribute to the spread of germs. Infants attending early childhood centers are more likely than those raised at home to contract diseases, particularly colds and diarrhea (Cox, 2022). When children are in groups or always in the same environment, they are more likely to contract an infection from one another. Because as they interact, play with and exchange toys, germs are transferred between them.



Moreso, early childhood centers expose children to people than just their peers; these people include teachers, and support workers, all of whom could potentially spread disease. There is a greater chance of illness transmission when children in the center meet with more people outside of their immediate social environment. As they interact with teachers, and support personnel, they are more likely to be exposed to a variety of infections than children who receive care just at home (Novianti & Garzia, 2020).

In addition, diversity of origins and health conditions found in the center, may be a risk factor for exposure to a spectrum of infections. Based on research, a range of microorganisms, including viruses, enteropathogenesis, and antibiotic-resistant bacteria, are present in the bacterial communities found in childcare centers is known as gastroenteritis (Cohen, 2022). Gastroenteritis is an irritation of the stomach and intestines that can cause vomiting. It can impact the gastrointestinal tract in any area (Albrecht et al., 2017). (WHO, 2021), report that gastroenteritis is the prime reason of death for children, particularly those below five years old. Gastroenteritis is responsible for 1.8 million childhood fatalities annually, or a significant percentage of mortality (18%).

According to (UNICEF, 2021), there are an estimated 700 million cases of diarrhea among children below five in underdeveloped nations each year. Children's gastroenteritis, often known as the stomach flu or stomach problem, is a frequent illness marked by gastrointestinal tract inflammation. Gastroenteritis present with symptoms such as cramps, vomiting, fever, and occasional nausea. (Mitra et al., 2021) also reaffirmed that symptoms like cramps, vomiting, frequent stooling, and fever are the most typical symptoms of gastroenteritis in children. Children who vomit or have diarrhea lose a lot of fluids through their stool, which can cause dehydration. Other symptoms of dehydration include feeling faint or lightheaded, sobbing with few or no tears, having a dry mouth or cracked lips, behaving extremely drowsy or less awake, and urinating less frequently among others.

Guarino et al. (2020) reported that many factors that cause gastroenteritis in children are either personnel negligence, bacterial or viral infections such as those caused by Salmonella, Escherichia coli (E. coli), Campylobacter, and Shigella, poor sanitation, overcrowding, inadequate hygiene practices, tainted water sources, parasitic illnesses like Giardia lamblia and Cryptosporidium can induce gastroenteritis. Gastroenteritis can result from consuming tainted food or drink that contains pathogenic bacteria, viruses, or parasites. Foodborne infections can be caused by improperly prepared or kept food, allergic reaction to the food as well as cross-contamination Consuming toxins generated by specific bacteria (such Staphylococcus aureus and Bacillus cereus) in tainted food can cause gastroenteritis. These infections are usually spread through contaminated food or water and can cause gastroenteritis in children. In certain instances, dietary allergies or intolerances can give rise to symptoms that mimic gastroenteritis in children. Fish, shellfish, eggs, milk, peanuts, tree nuts, soy, and wheat are common food allergies. Children are more susceptible to contracting gastroenteritis if they have poor hygiene habits, inadequate sanitation, or close contact with diseased people. Children who are receiving chemotherapy or have certain medical disorders that compromise their immune systems may be more vulnerable to gastroenteritis (Mokomane et al., 2018)

Azor-Martinez et al (2020) also stated that to stop the spread of gastroenteritis in children, it is critical to uphold basic hygiene habits, such as routine hand washing with soap and water, careful handling and preparation of food, then avoiding contact with people who are experiencing symptoms of the illness. Furthermore, newborns can now receive a rotavirus vaccination, which has greatly decreased the frequency of severe gastroenteritis cases brought on by this virus. In cases where a child exhibits severe illness or has blood or mucus in their feces, medical professionals may prescribe a stool, urine, or blood test to assess dehydration and determine the cause of the condition.



Studies in other countries and some states in Nigeria revealed that, there is a negative perception of parents and teachers on gastroenteritis in the early childhood centers. For instance, an investigation on parents' perception of gastroenteritis showed that majority of the parents had poor awareness of the disease; they were not able to define and characterize gastroenteritis. Also, there was a negative perception of gastroenteritis and its impact on children. About 43.7% of parents whose children experienced the illness thought it was mild and would go away on its own (Samuel & Nowamani, 2024). Furthermore, irregular hand washing was reported by at least 56.5% of teachers whose wards acquired the condition thereby giving the evidence of inadequate hygiene practices among them (Acaye 2023). Prior research indicates that teachers do not fully comprehend gastroenteritis and its causes; they are unable to list or state the risk factors and causes of diarrhea (Cengage et al ,2020). Hailemariam et al (2018) reported that good feeding routines with appropriate fluids such as salt and sugar solutions, soups and weaning foods that are readily available at home can prevent dehydration and replenish electrolytes that are lost during gastroenteritis. Also, exclusive breastfeeding is essential for the health and survival of children. Breast milk is rich in nutrients and antibodies, providing the right quantities of fat, sugar, water, and protein necessary for proper growth and development. Exclusive breastfeeding strengthens the children's immune system, reducing the risk of life-threatening illnesses like gastroenteritis and other diseases. The World Health Organization commends that children be exclusively breastfed for the first six months of life, with continued breastfeeding up to two years or above, along with the introduction of complementary foods (United Nation's Children Fund [UNICEF], 2018).

It was recommended that exclusive breastfeeding of children is essential because breast milk contains all the needed nutrients. Breast milk substitutes such as formula and other kinds of milk, or porridge are nutritionally inadequate if not properly handled or prepared can leads to contamination, thereby exposing children to the risk of infection and death. It was observed that the majority of children who had gastroenteritis were not exclusively breastfed, this is because breast milk which contains antibodies against diseases, and promotes nutrition which will reduce its chances of occurring was insufficient. Regrettably, teacher seems not to perceive the main causes and preventive measures towards this disease. All this became a cause for concern; hence this study tends to ascertain teacher's perception of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State.

Over time, there has been evidence of teachers' negligence, poor practice of hygiene in early childhood center in Nsukka Local Government Area, Enugu State. These centers have been confronted with high outbreak of gastroenteritis, which result to poor enrollment, absenteeism. This is rightly captured by the caregivers and other stakeholders. It was observed in Nsukka that an estimated 20% of children below five years old had gastroenteritis within 2-week resumption period in the center; this makes the children absent thereby painting the center not conducive. These outbreaks are due to varieties of environmental and social dynamics-related factors such as overcrowding and poor hygiene practices among others. Research studied, indicated that children enrolled in early childhood education centers are sometimes at an increased risk of contracting disease because of these factors mentioned above. The study points us to the question: "has teachers' perceived gastroenteritis in the early childhood centers in Nsukka Local Government Areas Enugu State"?

### Purpose of the Study

The main purpose of this study was to ascertain teacher’s perception of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State. Specifically, the study determined:

1. teachers’ perception on the causes of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State; and
2. teachers’ perception on preventive measures for gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State.

### Research Questions

The following research questions guided the study.

1. What is the teachers’ perception on the causes of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State?
2. What is the teachers’ perception on preventive measures for gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State?

### Methods

Descriptive survey design research was adopted for the study. The population of the study covered all the 100 early childhood teachers in Nsukka Local Government Education Authority (2023). Sample size for the study was 100 teachers. Instrument was titled Perception on Gastroenteritis Questionnaire (PGQ). The instrument consists of two sections A and B. Section A elicited information on the demographic variables of the respondents. The section B contained 2 clusters that elicited information on the research questions. Instrument was validated by three experts, two in the department of Educational Foundations (Childhood Education), and one from the Department of Science Education (Measurement and Evaluation Unit). Trial test was conducted on the instrument using Cronbach Alpha to determine the internal consistency of the items. Reliability coefficients of 0.94 and 0.95 were obtained for sections B and C of the PGQ respectively. The overall coefficient value of 0.94 was obtained for the instrument. Instrument was administered directly to the teachers by the researcher with 4 four research assistants to determine their responses. Mean and standard deviation were used for data analysis. A mean score of 2.50 and above indicated agreement to the item question, while mean score below 2.50 indicated disagreement to the item question.

### Results

**Table 1: Mean Scores of teachers’ perception on the causes of gastroenteritis among children in the early childhood centers**

SN	Item Statement	Mean	SD	Dec.
	Negligence to rotavirus vaccination	2.70	0.89	Agree
	Ingestion of contaminated food or water	2.82	0.84	Agree

Parents /teacher negligence	2.89	0.77	Agree
Poor sanitation	2.91	0.78	Agree
Overcrowding	3.04	0.90	Agree
Inadequate hygiene practices	2.96	0.78	Agree

From Table 1 above, all the mean rating scores of the respondents are 2.70, 2.82, 2.89, 2.91, 3.04 and 2.96 for item 1 to 6 respectively. The mean scores range from 2.50 and above. Therefore, the results imply that the teachers agree that the items mentioned above are the causes of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State.

**Table 2:** Mean Scores of teachers’ perception on preventive measures for gastroenteritis among children in the early childhood centers in Nsukka Local Government Area in Enugu State

SN	Item Statement	Mean	SD	Dec.
1	Encouraging rotavirus vaccination	3.81	0.61	Agree
2	Implement exclusion for ill children, educators, and staff	3.21	0.81	Agree
3	Maintaining environmental cleanliness	2.56	0.72	Agree
4	Promote hygiene practices	2.89	0.69	Agree
5	Identifying the symptoms	2.91	0.86	Agree
6	Encouraging exclusive breast feeding	2.89	0.92	Agree

From Table 2 above, all the mean rating scores of the respondents are 3.81, 3.21, 2.56, 2.89, 2.91 and 2.89 for items 1 to 6 respectively. The mean scores range from 2.50 and above, and therefore imply that the respondents agree that items mentioned above are preventive measures for gastroenteritis among children in the early childhood centers in Nsukka Local Government in Enugu State

### Discussion of Findings

This study set out to investigate teacher’s perception of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area in Enugu State. The results indicated that, teachers agreed on the causes and preventive measures for gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State. This is in line with the finding of (Mokomane et al., 2018) which indicated that variety of things can cause gastroenteritis among children in the early childhood centers. It could be poor sanitation, overcrowding, inadequate hygiene practices, tainted water sources, parasitic illnesses like Giardia lamblia and Cryptosporidium and inappropriately prepared or kept food among others can induce gastroenteritis.

This finding corroborates the earlier study by Azor-Martinez et al.(2020) who found that promoting handwash with soap and water, implement exclusion for ill children, educators and staff, maintaining environmental cleanliness, promote hygiene practices, identifying symptoms and encouraging exclusive breast feeding among others are the preventive measures for gastroenteritis among children in the early childhood centers in Nsukka Local Government Area in Enugu State. Moreover, the outcome of this study confirms an earlier study by (UNICEF, 2018) that encouraged exclusive breast feeding ,because breast milk contain all the necessary nutrients needed by children .



The objective of this study was to ascertain teacher's perception of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State. The results of the study showed that teacher's perception of gastroenteritis among children in the early childhood centers in Nsukka Local Government Area, Enugu State has been perceived. In this case, the situation of the cases of gastroenteritis in the centers has led to refresh teacher's mindset on the causes and preventive measures and this is highly appreciable.

### **Conclusion**

The study concluded that teacher's perception of gastroenteritis in the early childhood centers is high, which shows that teachers, parents and other stakeholders have a lot to do to prevent increasing tragic experience of gastroenteritis among the children. Also, there is need to know various safety measures which is suitable for the prevention of gastroenteritis. Therefore, there is need for all stakeholders, parents, education planners, childhood educators, teachers, governments and other agencies are urgently called to observe strategic designs and implementable policies to prevent this deadly disease called gastroenteritis among the children

### **Recommendations**

1. There should be enlightenment regarding gastroenteritis such that adequate caution should be made against the disease that steals children.
2. Parents should be encouraged to go for the Rotavirus vaccine for their children.
3. Government should make clean water and sanitation services available to the people to reduce exposure to infections.
4. Teachers and parents should be enlightened on the need for basic first aid knowledge such as ORS (Oral Rehydration Solution) and seek immediate medical attention when needed.

The researchers observed that participants are very small because the number of preprimary teachers teaching in the public primary schools is few. Therefore, further studies with large sample sizes are required to further ascertain the findings and enhance generalization. Also, the researchers analyzed only quantitative data.

### **References**

- Acaye Ivan. (2023). Knowledge, Attitudes, and Practices of Parents Regarding Gastroenteritis in Children Under the Age of Five Attending FRRH Fort Portal City. International Digital Organization for Scientific Research ISSN: 2579-0781 Idosr Journal of Experimental Science 9(3) 102-110, 2023.  
<https://doi.org/10.59298/IDOSR/JES/111.1.10108>.  
[https://www.researchgate.net/publication/374752945\\_Knowledge\\_Attitudes\\_and\\_Practices\\_of\\_Parents\\_Regarding\\_Gastroenteritis\\_in\\_Children\\_Under\\_the\\_Age\\_of\\_Five\\_Attending\\_FRRH\\_Fort\\_Portal\\_City](https://www.researchgate.net/publication/374752945_Knowledge_Attitudes_and_Practices_of_Parents_Regarding_Gastroenteritis_in_Children_Under_the_Age_of_Five_Attending_FRRH_Fort_Portal_City)
- Albrecht, L., Hartling, L., & Scott, S. D. (2017). Pediatric acute gastroenteritis: Understanding caregivers' experiences and information needs. *Canadian Journal of Emergency Medicine*, 19(3), 198–206. <https://doi.org/10.1017/cem.2016.363>
- Azor-Martinez, E., Garcia-Fernandez, L., Strizzi, J. M., Cantarero-Vallejo, M. D., Jimenez-Lorente, C. P., Balaguer-Martinez, J. V., Torres-Alegre, P., Yui-Hifume, R., Sanchez-Forte, M., & Gimenez-Sanchez, F. (2020). Effectiveness of a hand hygiene program to reduce acute gastroenteritis at child care centers: A cluster randomized trial. *American*



Journal of Infection Control, 48(11), 1315–1321.

<https://www.sciencedirect.com/science/article/pii/S0196655320301644>

Cengage, G. & Ziyanda, P. (2020). Knowledge and perceptions of parents and caregivers on the causes of diarrhoea among children under five years living in the rural areas of the Eastern Cape 2020.

Cohen, M. B. (2022). Bacterial, viral, and toxic causes of diarrhea, gastroenteritis, and anorectal infections. In T. C. Wang, M. Camilleri, B. Lebowitz, A. S. Lok, W. J. Sandborn, K. K. Wang, & G. D. Wu (Eds.), *Yamada's Textbook of Gastroenterology* (1st ed., pp. 2947–3005). Wiley. <https://doi.org/10.1002/9781119600206.ch144>

Cox, J. L. (2022). Fever and Diarrhea Incidence in a Daycare Setting [Master's Thesis, The Ohio State University].

[https://rave.ohiolink.edu/etdc/view?acc\\_num=osu1658424419875907](https://rave.ohiolink.edu/etdc/view?acc_num=osu1658424419875907)

day. (2021, July 23). Benefits of Early Childhood Childcare Centers. Changing Tomorrow Academy. <https://changingtomorrowacademy.com/benefits-of-early-childhood-childcare-centers/>

Fong, M. W., Leung, N. H., Xiao, J., Chu, D. K., Cheng, S. M., So, H. C., Li, Y., Ip, D. K., Peiris, J. M., & Cowling, B. J. (2020). Presence of influenza virus on touch surfaces in kindergartens and primary schools. *The Journal of Infectious Diseases*, 222(8), 1329–1333. <https://academic.oup.com/jid/article-abstract/222/8/1329/5807949>

Goagoses, N., Suovuo, T. “Bgt,” Winschiers-Theophilus, H., Suero Montero, C., Pope, N., Rötönen, E., & Sutinen, E. (2024). A systematic review of social classroom climate in online and technology-enhanced learning environments in primary and secondary school. *Education and Information Technologies*, 29(2), 2009–2042.

<https://doi.org/10.1007/s10639-023-11705-9>

Guarino, A., Aguilar, J., Berkley, J., Broekaert, I., Vazquez-Frias, R., Holtz, L., Lo Vecchio, A., Meskini, T., Moore, S., Rivera Medina, J. F., Sandhu, B., Smarrazzo, A., Szajewska, H., & Treepongkaruna, S. (2020). Acute Gastroenteritis in Children of the World: What Needs to Be Done? *Journal of Pediatric Gastroenterology and Nutrition*, 70(5), 694–701. <https://doi.org/10.1097/MPG.0000000000002669>

Ji, B., & Ye, W. (2024). Prevention and control of hospital-acquired infections with multidrug-resistant organism: A review. *Medicine*, 103(4), e37018.

[https://journals.lww.com/md-](https://journals.lww.com/md-journal/fulltext/2024/01260/prevention_and_control_of_hospital_acquired.47.aspx)

[journal/fulltext/2024/01260/prevention\\_and\\_control\\_of\\_hospital\\_acquired.47.aspx](https://journals.lww.com/md-journal/fulltext/2024/01260/prevention_and_control_of_hospital_acquired.47.aspx)

Mitra, S., Ruiz, M. A. G., Virani, S., & Korenis, P. (2021). A unique case of dehydration-related psychosis: Witnessing a mirage in the city. *The Primary Care Companion for CNS Disorders*, 23(2), 32235. <https://www.psychiatrist.com/pcc/a-unique-case-of-dehydration-related-psychosis/>

Mokomane, M., Kasvosve, I., Melo, E. de, Pernica, J. M., & Goldfarb, D. M. (2018). The global problem of childhood diarrhoeal diseases: Emerging strategies in prevention and management. *Therapeutic Advances in Infectious Disease*, 5(1), 29–43.

<https://doi.org/10.1177/2049936117744429>



- Novianti, R., & Garzia, M. (2020). Parental Engagement in Children's Online Learning During COVID-19 Pandemic. *Journal Of Teaching And Learning In Elementary Education*, 3(2), Article 2. <https://doi.org/10.33578/jtlee.v3i2.7845>
- Samuel, O., & Nowamani, D. (2024). Knowledge, Attitude, and Practices of Mothers/Caregivers on Home Management of Diarrhea in Children Under Five Years Receiving Care at Entebbe Hospital: A Cross-Sectional Study. *Student's Journal of Health Research Africa*, 5(3), 11–11. <https://sjhresearchafrica.org/index.php/public-html/article/view/964>
- UNICEF. (2018). National Nutrition and Health Survey (NNHS). Report on the Nutrition and Health Situation of Nigeria [homepage on the Internet]. [Cited 2019 Sept 30]. Available from: <https://www.unicef.org/nigeria/reports/national-nutrition-and-health-survey-nnhs-2018>.
- UNICEF. (2021). Diarrhoea: Why children are still dying and what can be done. New York, USA.
- WHO. (2021). Department of Child and Adolescent Health and Development. The evolution of diarrheal and acute respiratory diseases control at WHO. World Health Organ.