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Gastrointestinal Infections and Risk Factors in Ogbia Local Government Area, Bayelsa State, Nigeria

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ABSTRACT

This study was carried out from October to December, 2025 to determine the prevalence of gastrointestinal parasitic infections among inhabitants in Kolo III community in Ogbia Local Government Area, Bayelsa State, Nigeria. Two hundred and thirty-six (236) faecal samples were collected randomly and examined using the standard operating procedure of the formol-ether concentration technique. The results showed an overall prevalence of 56(24.15%). The prevalence was higher in males, 35(27.56%), than in females, 22(20.37%). The age group between 12 and 16 years had the highest prevalence rate of 26(54.11%). This is followed by ages 7-11 years 10(47.62%), Age bracket 17-21 years recording 11(35.48%), 42-46 years recording 2(25.0%), while the least was recorded in age brackets 32-36 with 1(4.71%) in this order. Age brackets 27-31, 37-41 years and 47 years and above recorded zero prevalence. The difference in infection rate between sexes and age groups was not statistically significant (P>0.05). Ascaris lumbricoides had the highest prevalence rate of 21(8.89%), followed by Entamoeba histolytica, Strongloides stercoralis, Hookworm, Schistosoma mansoni and Diphyllobothrium latum with 9(3.81%), 9(3.81%), 7(2.97%), 6(2.54%) and 3(1.27%), respectively. The study revealed a high prevalence of gastrointestinal parasites in the study area. Factors such as lack of social amenities, poor environmental sanitation, poor sanitation of the rural environment, low access to clean drinking water, inadequate sewer drainage, source of drinking water, toilet facilities, washing of hands after using the toilets, washing of hands before meals, pattern of waste disposal and washing of hands after waste disposal were observed to enhance the prevalence of gastrointestinal parasites in the area. Therefore, there is a need for effective control measures such as massive chemotherapy, provision of adequate social amenities, especially portable drinking water, improved sanitation and personal hygiene, as well as educating the people on the effects of these parasites.

Keywords: *Gastrointestinal parasites, drinking water, Ogbia, Praziquantel, Bayelsa State.*

INTRODUCTION

Gastrointestinal parasitic infections (GPIs) are among the major public health problems globally, particularly in developing countries like Nigeria. Gastrointestinal parasites are typically protozoa and helminthes (Arora, 2012). Parasitic infections are chronic and insidious disease producing long-term effect on man. They are among the most common and neglected infectious disease worldwide (WHO, 2020), hence intestinal parasitosis refers to a group of diseases caused by one or two or more species of protozoa's, cestodes, nematodes, trematodes, several infectious diseases are caused by members of these previously listed organism having been considered, as neglected tropical disease (NTDs) (Salvioli et al., 2006). Records indicated

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that an estimated 65,000 species of protozoa occur in water and on land with over 100,000 species adopting the parasitic or symbiotic mode of interaction. Gastrointestinal parasitic infections have widespread distribution and are prevalent occur in the poor regions of America, Asia and sub-Saharan Africa, where there is inadequate supply of potable water, personal hygiene and environmental cleanliness (WHO, 2017).

The most common gastrointestinal parasites include Taenia spp, *Ascaris lumbricoides*, *Strongyloides stercoralis* hookworms and Schistosoma spp, while protozoa include *Toxoplasma gondii*, *Giardia lamblia*, *Entamoeba histolytica* and *cryptosporidium parvum* (Norhayati et al., 2003). These gastrointestinal parasites are serious public health concern and they constitute a leading cause of morbidity (Brooker et al., 2006; Moore et al., 2001; Crompton & Nesheim, 2002). In 2010, about 438.9 million people were reportedly at risk of hookworm, 819.0 million and 464.6 million were also at risk of *Ascaris lumbricoides* and *Trichuris trichiura* respectively (DCD, 2017; Pullan et al., 2010). WHO (2017) reported that about 1.5 billion people globally are disease-ridden with soil transmitted helminthes and that at least 218 million people need preventive treatment for schistosomiasis in 2015. Estimates by WHO (2020), shows that about 3.5 billion are affected with intestinal parasites; 450 are ill as a result of these infections, majority being children and over 600 million school children are living in areas where these parasites are widely transmitted and are indeed of urgent treatment and intervention. Intestinal helminthes are the most common and diseases with a very higher negative public health and socio-economic impact (Uthman et al*.,* 2024; Enimien et al., 2014).

Gastrointestinal parasitic infections have been implicated in causing increased ill health among children in school and adult females during child bearing (Mbanugo & Abaziri, 2002). Children are commonly affected due to their susceptibility to poor nutrition. Apart from causing morbidity and mortality, gastrointestinal parasitic infections especially helminthes have been associated with a higher threat of nutritional anaemia (Arene, 1998; Karz & Taylor, 2001; Rodnquz-Morales et al*.,* 2006), undernourishment, development deficits and poor educational achievements, change in resistance and immune impotence and poor cognitive skill (Karz & Taylor, 2001; Rodnquz-Morales et al*.,* 2006; Udonsi, 2002).

In Nigeria, most human and animal waste are disposed into the soil and water bodies, environments that are suitable for the development of the parasites. This influences the transmission of the infective stages of these gastrointestinal parasites (Udensi & Okpara, 2011). The prevalence of intestinal parasitic infections varies considerably from place to place, in relation to the pattern of transmission of the disease (UNICEF, 2011). Public health specialists are concerned that these infectious impair children's growth and development (Utume et al., 2015). Despite the improvement of the quality of medical service in terms of diagnosis of parasitic disease, most parasitic diseases are still considered as major challenge for health centers and staff in many developing countries. Major contributors to the high burdens of intestinal parasites includes, poverty, poor environmental sanitation, personal hygiene, lack of portable drinking waters and inadequate healthcare, which characterizes most communities in developing countries including Nigeria, (Ekunday et al., 2007; Waybastom & Aisen, 2005).

In Nigeria, young children are reported to be heavily affected by intestinal parasites compared to adults due to their increased nutritional requirement and their less developed

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immune system. Intestinal parasitic infection in this age group has been linked with significantly reduced growth and increased risk of protein/energy mal-nutrition, iron deficiency, anaemia and reduced cognitive/phsycomotor development (Hotez et al., 2014). The public health importance of gastro-intestinal parasites due to their high morbidity and motility rate in school children and women during their child bearing years in Nigeria towns and villages (Odu et al., 2012). These are mostly the major problems in rural settlement in Nigeria because of their poor socio-economic status and lack of basic amenities such as water and toilet facilities (Gbonhinbor et al., 2022; Okon & Oku, 2009).

Symptom findings of gastrointestinal parasitic infections include diarrhoe, abdominal discomfort, anaemia and bloody diarrhea stunted growth and in overt cases may lead to rectal prolapsed which may even result to death. Gardia is the common cause for traveler's diarrhoe. *E. histolytica* continues to be an important global health issue being the third leading cause of death from parasitic infections (Ghosh et al., 2019.) Although 90 percent of *E. histolytica* infections are asymptomatic, nearly 50 million people become symptomatic, with up to 100,000 deaths yearly (Shirley et al., 2018). Those infected by Entamoeba are mostly colonized by either *E. histolytica* / *E. dispar*. *E. histolytica* is the pathogenic form and can cause amoebic colitis and extraintestinal amoebiasis. *E. dispar* is considered to be nonpathogenic and causes no signs of disease (Stanley, 2010). The effects of these infections are alarming and adverse; hence these infections are known to trigger immune response in man, present problem for the body's ability to fight disease, thus making affected individuals more prone to co-infections as was noted by (CDC, 2022). For *Ascaris lumbricoides,* entangled adult worms have also been documented as leading to mechanical intestinal obstruction (blockage) in 0.005e2 per 1000 infections per year (Arora D. & Arora B., 2014). Heavy infections can cause intestinal blockage and impair growth in children. Other symptoms such as cough are due to migration of the worms. For Schistosomiasis, symptoms are associated with anaemia, blood in stool, diarrhea and enlarged liver/ spleen (hepatosplenomegaly) (WHO, 2026). Worldwide, mixed infections by these parasites with hookworm, roundworm, amoeba, have been observed (Ukpai & Ugwu, 2003).

Nigeria has a high number of cases of intestinal parasitic infections with about 29 million infected cases and about 101million people are at risk of infection. A number of factors ranging from political, demographic, social economic environmental, climatic and cultural trends are known to determine that transmission of intestinal parasitic infections, directly or indirectly; high infection prevalence has been correlated to coming in contact with the environment in various ways. However, major limitation to intestinal parasite control has been limited due to the lack of public health educations, modern health facilities and toilet facilities. In Nigeria, young children are reported to be dipropionatly affected by gastrointestinal parasites compared to adults due to their increased nutritional requirement and their less developed immune system. Gastrointestinal parasitic infection in this age group has been linked with significantly reduced growth and increased risk of protein/energy mal-nutrition, iron deficiency, anaemia and reduced cognitive/phsycomotor development. Within this context, the present study aims to investigate the prevalence of gastrointestinal parasitic infections among inhabitants of Kolo in Ogbia L.G.A, Bayelsa State, Nigeria.

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Gastrointestinal parasitic infections still remain a global burden in the lives of people most especially children living in poor and low-income earning countries. This study focuses on the need to reduce disease morbidity, mortality and transmission rates in Kolo III. Nigeria has a high exposure to infected environment, makes school children, farmers, women and women in this region more affected especially in riverine communities which lack access to health facilities, portable drinking water and modern toilet facilities. Besides its clinical implications, it contributes to their growth retardation and poor academic performance. A number of factors ranging from political, demographic, social economic environmental, climatic and cultural trends are known to determine that transmission of intestinal parasitic infections, directly or indirectly; high infection prevalence has been correlated to coming in contact with the environment in various ways.

However, a major limitation to gastrointestinal parasite control has been limited due to the lack of orientations and medical facilities. This study therefore aimed at propounding solutions to reduce the worm parasitic load through public health intervention program by mass deworming of inhabitants. It is will provide an opportunity for designing intervention strategies in the management of the diseases caused by this parasite and putting in place long-term strategies for sustainable morbidity control. Despite the serious health impact resulting from this infection and their predominance in areas of poverty, their geographical distribution especially in riverine areas of Koko community in Ogbia Local Government Area, Bayelsa State remains incompletely studied. This information is essential for strengthening the understanding the transmission patterns of gastrointestinal parasites which in turn will be used in developing sound, targeted, and evidence-based control intervention in the study area. This study is designed to determine the current status of the prevalence of gastrointestinal parasitic infections in the fresh water rural community where the factors that contribute to its sustainability in these community thrive. Findings in this research will be useful for control programmes and probably the eradication of this disease.

MATERIALS AND METHOD

The study was carried out among inhabitants in Kolo in Ogbia Local Government Area, Bayelsa State, Nigeria from October to December, 2025. Kolo is cited at along the Obhigh River and has boundaries with Otakeme on the East and Emeyal II on the East in Ogbia Local Government Area of Bayelsa State. The community has GPS coordinates, it lies between latitude 44154"N and longitude 61912"E with an average annual rainfall of 2909. Its temperature varies from 27^0C to 30^0C From November-March dry season. Raining season begins from April to October with its peak in September. The language spoken is Ogbia language and they are known for occupations such as vehicle drivers, boat driving, fishing, businesses, civil servants, retired civil servants, artisans, farming, etc. Their agricultural produce includes maize, sugarcane, plantain, cassava, banana, etc. The community also hosts three primary schools and one secondary school. The community has a functional health facility. Their major sources drinking water is sachet water other sources for drinking and for

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domestic activities include boreholes, streams, rivers, rain water and community tap being operated and supplied by the Ogbia Local Government Area council.

Ethical clearance was obtained from the Community chiefs, community elders and Community Development Committee (CDC) before the commencement of the research. Written informed consents were obtained from the CDC and Informed consents were given by community chiefs, elders prior to the study. The participants were properly enlightened on the aims, objectives, benefits and protocols of the study, and need for voluntary participation and the right to stop participation at any time.

A total of 236 stool samples were collected from consented inhabitants from ages 7 years and above. Structural questionnaires were used to collect data such as age, gender, level of study source of drinking water, type of toilet facilities, water contact pattern, hand hygiene practice, personal hygiene as well as hand washing pattern before handling raw fruits raw and cooked vegetables (foods) and after using the toilets. The criteria needed to describe this population were children from 7 years of age and above. The residents were enlightened on the public health significance in the community. Further information was passed to the participants via CDC and community chiefs. Participants were allowed to withdraw at any time.

Clean wide mouth screw-cap sterile plastic containers were given to 236 randomly selected participants. All samples were collected between 8:00am to 10:00am the following day. The participants were instructed on how collect freshly passed stool samples free of urine to be returned back the next day. Returned samples were collected with the aid of a structured questionnaire and labeled appropriately. The samples were transported to the laboratory for analysis.

The routine part of complete stool examination was carried out using direct (Iodine and saline) and formal-ether concentration methods to detect parasites eggs, cysts and trophozoites (Cheesbrough, 2006). Each stool sample were examined macroscopically for colour, consistency (formed, semi-formed or watery) and presence of blood or mucus or blood and also for adult worms and tapeworm segments.

Direct Smear method

According to Cheesbrough, (2006), a drop of physiological saline and Lugol's iodine was placed on a grease free slide. Using a stick, 2g of faecal sample were placed on the physiological saline solution and emulsified and then also placed on the other end of the slide containing the Lugol's iodine. The emulsified faecal smear was then covered with a glass cover slip. The prepared slide was viewed under a microscope using 10x and 40x objectives lens for parasite identification.

Formol-ether concentration technique

All the stool samples were analysed using formol ether concentrated technique. 1ml of well-mixed stool samples were put in a clean test tube containing 4ml of 10% formol water. 3ml of 10% formol water was then added again and mixed by shaking. The suspension was sieved using a coffee strainer into a centrifuge tube. 3ml of diethyl ether will be added and stoppered. The mixture was shaken vigorously for 1 minute. The stopper was then loosened with the aid

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of a tissue paper and the suspension was centrifuged at 3,000rpm for 5 minutes. The entire column of the fluid below the faecal debris and ether was carefully removed using a pastuer pipette and then transferred into another centrifuge tube. 10% formol water was added to the transferred suspension to make up to 10ml. The suspension was again centrifuged at 1,000 rpm for 10 minutes. The supernatant was decanted. The bottom of the tube was tapped to re-suspend and mix the sediments. The deposits were collected with the aid of a Pasteur pipette and placed on a clean grease-free glass slide with a small drop of iodine on it for clear microscopic viewing. A cover glass slip was placed on the slides and viewed under a light microscope using the x10 and x40 magnification for the presence of parasite cysts, larvae or eggs.

Test of statistical significance was carried out using SPSS package version 22.0. The statistical analysis for significant differences was done using chi-square at a significant level of $p<0.05$

RESULTS AND DISCUSSION

Six species of parasitic helminth eggs were identified. They include: Ova of *Ascaris lumbricoides, Entamoeba histolytica/dispar,* Larvae of *Strongyloides stercoralis*, *Schistosoma mansoni,* Egg of Hookworm *spp* and *Diphyllobothrium latum.* A total of 236 consented participants of which 127 males and 108 females faecal samples were examined. 57(24.15%) out of the 236 examined were found to have gastrointestinal infections. More prevalence was recorded in males 35(27.56%) than females 22(20.37%) Figure 1.

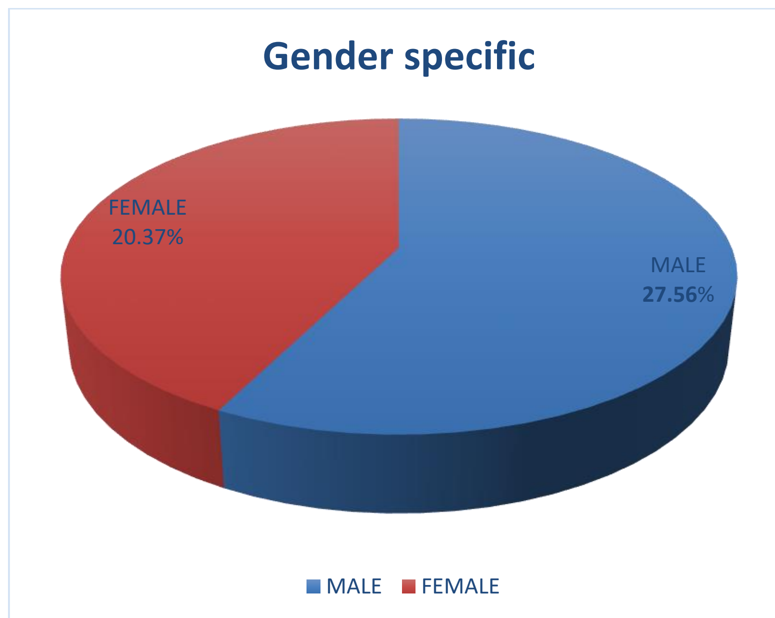

Figure 1: Prevalence in relation to gender

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Table 1: Age specific prevalence of gastrointestinal infection in sampled community

Age groups	Total number examined	Total number infected	*A. lumbricoides*	*D. latum*	*E. histolytica*	*S. mansoni*	*S. stercoralis*	Hookworm	Prevalence (%)
7-11	21	10	3(14.23%)	2(9.52%)	2(9.52%)	-	1(4.76%)	2(9.52%)	47.62
12-16	48	26	10(20.83%)	1(2.08%)	5(10.42%)	3(6.25%)	3(6.25%)	4(8.33%)	54.17
17-21	31	11	3(9.68%)	-	2(6.45%)	3(9.68%)	2(6.45%)	1(3.23%)	35.48
22- 26	44	7	2(4.55%)	-	2(4.55%)	-	3(6.82%)	-	15.91
27- 31	40	-	-	-	-	-		-	-
32- 36	21	1	1(4.76%)	-	-	-	-	-	4.71
37- 41	13	-	-	-	-	-	-	-	-
42- 46	8	2	2(25%)	-	-	-		-	25.0
47 & Above	10	-	-	-	-	-	-	-	-
Total	**236**	**57**	**21(8.89%)**	**3(1.27%)**	**11(4.66%)**	**6(2.54%)**	**9(3.81%)**	**7(2.97%)**	**24.15**

Source: Laboratory Experimentation, 2025

Table 1, shows that prevalence was highest in age bracket 12-16 years with prevalence of 26(54.11%). This is followed by ages 7-11 years 10(47.62%), Age bracket 17-21 years recording 11(35.48%), 42-46 years recording 2(25.0%), while the least was recording in age brackets 32-36 with 1(4.71%) in this order. Age brackets 27-31, 37-41 years and 47 years and above recorded zero prevalence. An analysis of Chi square Test of the age specific prevalence of gastrointestinal parasitic infections in the sampled community showed significant difference at $P<0.05$; P (0.0001) among sampled and infected population.

Table 2: Pattern and Practices among inhabitants that promotes transmission of gastrointestinal infections in sampled community

Variables	No. examined	No. infected	Prevalence (%)
Source of drinking water			
Borehole	66	3	4.55
Community Tap	119	33	27.73
River	37	20	54.04
Hand dug well	-	-	-
Stream	-	-	-
Rain	14	1	7.14
Treatment of Water at home			
Yes	86	6	6.98
No	153	51	33.33
Method of Treatment			
Chlorine	-	-	-
Boiling	62	2	3.23
Alum	24	7	29.17
Never	-	-	-
Toilet Facilities			

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Water cistern	19	2	10.53
Pit latrine	153	24	15.69
River side	64	31	48.44
Pattern of Hand washing after using toilet			
Soap and water	102	3	2.94
Ash and water	-	-	-
Water alone	124	54	43.55
Waste disposal pattern			
River/ stream	78	36	46.15
Dust bin	127	21	16.54
Garbage pit	6	-	-
Burning	25	-	-
Washing hands after garbage/waste disposal			
Yes	42	6	14.29
No	194	51	26.29
Hand washing before eating meals			
Yes	101	9	8.91
No	135	48	35.56
Pattern of washing raw vegetables/ fruits before eating			
Always	21	1	4.76
Sometimes	77	5	6.49
Rarely	92	37	40.22
Whenever l remember	46	14	30.43

Source: Laboratory Experimentation, 2025

Table 2 shows the Source of drinking water, toilet facilities, washing of hands after using the toilets, washing of hands before meals, pattern of waste disposal and washing of hands after waste disposal were also found to be associated with gastrointestinal parasitic infections. Higher prevalence was recorded among the inhabitants that drank river water and the community tap water recording 54.04% and 27.73%. Among inhabitants that use toilet facilities, higher prevalence was observed with persons made use of the riverside recording 48.44%. Prevalence of 46.45% and 26.29% was seen among inhabitants who disposed garbage at the river/stream and also among inhabitants who did not wash their hands after disposal. 40.22% was recorded among inhabitants who rarely washed their fruits/vegetable before eating. Prevalence of 43.55% was recorded among inhabitants who used water alone to wash their hands after defecation while 2.94% was recorded among those who used soap and water (Table 2).

This study on the prevalence of gastrointestinal parasitic infections among inhabitants in Kolo III community in Ogbia Local Government Area, Bayelsa State, Nigeria is to formulate sufficient prevention and control intervention strategies (Gelaw et al., 2013; Teklemariam et al., 2014; Gbonhinbor et al., 2022). The results obtained in this study showed that gastrointestinal parasitic infection is common in the sampled area. The study revealed generally a high level of gastrointestinal parasitic infection in the studied population recording an overall prevalence of 24.15%. This result is lower than that obtained 31.6% obtained in Jos North

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Local Government Area of Plateau State, Nigeria (Ogwurike et al., 2010), reported by Damen et al. (2011) who reported 80.9% in Konduga LGA, Borno State, Nigeria, Iduh et al. (2015), reported 74.50% among the "Almajiris" in Sokoto metropolis, Sokoto State, Nigeria and Bala *et al.* (2019) and reported 29.1% in outpatients in Bafoussam II, West Region, Cameroun by Yannick et al. (2021). The high infections encountered in this study are of great importance to the well-being and development of man, especially in children in whom they constitute a health problem (Usip & Matthew, 2015). The results may be attributed by the factors such as lack of good social amenities, poor environmental sanitation, socioeconomic status, treatment of portable water supply and ignorance have been observed to enhance the prevalence of intestinal parasites in the study area (Usman et al., 2017; Usman & Sahura, 2023). However, results obtained in this study is higher than studies carried out by Funso-Ania et al. (2020) were they obtained prevalence of 13% in a review of the prevalence and pattern of intestinal parasites in Nigeria in the South-south region.

Similarly, higher prevalence rate was found in males (27.56%) than in females (20.37%) counterpart in this study. This finding corroborates with the earlier report of Usman *et al*. (2016), Gbonhinbor et al. (2019), Taiwo et al. (2017), Eboh et al. (2022), Funso-Aina et al. (2020) who all reported higher prevalence of gastrointestinal parasite in males than females in Bauchi, Abeokuta, Delta and across the geopolitical zones in Nigeria respectively. This observation could be linked to more exposure of males with risk factors such walking barefooted, road side food, playing in an infected environment (swimming and farms) than and their female counterparts.

Age-group between 12-16years had the higher prevalence rate (54.17%) than other in this study. This may be due to the fact that children of school-age are more infected with intestinal parasites (Isyaku et al., 2015; Bala et al., 2019; Belete et al., 2021). Although other researchers reported low prevalence in older age groups and are all attributes it to better understanding and more application of proper personal hygiene measures (Gupta et al. 2020; Eboh et al., 2022).

Six different species of parasites were detected in the study area; *Ascaris lumbricoides* (8.89%) was the most prevalent parasite followed by *Entamoeba histolytica* (4.66%), *Strongyloides stercorslis* (3.81%), *Schistosoma mansoni* (2.54%), Hookworm (2.97%) and *Diphyllobothrium latum* with (1.27%) respectively. This study agrees with the study by Usman *et al*. (2023) where they reported the most prevalence of eggs *Ascaris lumbricoides* (19.01%). Similarly, *Ascaris lumbricoides* was reported in many studies of gastrointestinal parasites in the country to have the highest prevalence than any other species (Chigozie et al., 2007; Aliyu et al., 2020; Usman et al., 2023). This parasite specie is cosmopolitan and usually occurs in a persons or communities with unhygienic habits. The specie affects about 25% of human population worldwide (WHO, 2020).

Specifically, Ascariasis can lead to acute abdominal emergencies. The prevalence of Hookworm infection with high prevalence rate in children could also could be as a result of the children not wearing protective shoes while playing within and outside school premises in the study area as observed by (Thomas et al., 2014; Gbonhinbor et al., 2022). Hookworm infections may result in iron deficiency anaemia which may be mild or life threatening (WHO, 1990);

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Trichuriasis can result in under-nutrition, stunted growth and iron deficiency anaemia (Cooper et al., 1990) Strongyloidiasis may lead to malabsorption syndrome in children. Entamobiasis can result in low cognitive functioning, diarrhaea, dysentery, abdominal pain and tenderness. The pupils infected with *Schistosoma mansoni* may have come in contact with infected water harbouring snail vector or swimming in contaminated water as the cyst thereby resulting in weakness in the body, loss of appetite, diarrhea, loosed or watery stools, stomach cramps, upset stomach, projectile vomiting (uncommon), bloating, excessive gas and burning. These health conditions are commonly seen presented by adults and children in many Nigerian health clinics and hospitals as previously observed by Hotez & Kamath (2009) and Gimba & Diwan (2015).

Several factors such as poor sanitation of the rural environment, low access to clean drinking water, inadequate sewer drainage, source of drinking water, toilet facilities, washing of hands after using the toilets, washing of fruits/vegetables before eating, washing of hands before meals, pattern of waste disposal and washing of hands after waste disposal were also found to be associated with gastrointestinal parasitic infections which was most prevalent among children. All these factors were previously recorded as risk factors for gastrointestinal parasitic infections (Forson et al., 2017 and Bakarman et al., 2019). Zemene and Shiferaw (2018) reported a higher prevalence in children who had source of drinking water from the river (36.8%), among children from mothers with poor hand washing practice (31.7%), and among children born from illiterate mothers (27.5%). Curiously, previous studies indicated that prevalence rates of gastrointestinal parasitic infections were significantly lower in children belonging to families with high income than those in the middle to low-income families (Radwan et al., 2019). This could be attributed to improved environmental sanitation, efficient food intake, better medical care and a consequent better immune response. The inhabitants and children in the study were heavily infected.

CONCLUSION AND RECOMMENDATIONS

The study revealed high prevalence of intestinal parasites in the study area. *Ascaris lumbricoides and Entamoeba histolytica* were the most prevalent parasites. Several factors such as poor sanitation of the rural environment, low access to clean drinking water, inadequate sewer drainage, source of drinking water, toilet facilities, washing of hands after using the toilets, washing of hands before meals, pattern of waste disposal and washing of hands after waste disposal were also found to be associated with gastrointestinal parasitic infections in the study area. Therefore, there is need for effective control measures such as massive chemotherapy, provision of adequate social amenities especially portable drinking water, improved sanitation and personal hygiene as well as sensitization on educating the people on the effects of these parasites.

As a public health measure therefore, we recommend that:

1. That periodic screening and treatment of gastrointestinal parasitic infections in by deworming of domestic or companion animals to limit zoonotic transmission.
2. There should be public health education about risks and prevention on gastrointestinal parasites particularly concerning contact with stray animal and personal hygiene.

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3. There is need for Bayelsa State government intervention to curb the spread of gastrointestinal parasites.
4. The practice walking barefooted and open defecation should be discouraged among the children.

These measures may help to prevent or reduce the prevalence and the risks of gastrointestinal parasitic infections to the minimal level in the study area.

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