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Assessment of the Prevalence, Knowledge, Attitudes, and Management Practices of Intestinal Parasitic Infections among School Children in Imo State, Nigeria

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ABSTRACT

This study assess the prevalence of intestinal parasitic infections and evaluate the knowledge, attitudes, and management practices related to these infections among children in Imo State, Nigeria. A cross-sectional survey was conducted from January, 2024 to February, 2025, in selected primary schools across Owerri and Orlu zones of Imo State. Total of 2,304 stool samples from children aged 5–13 years were collected and examined using Direct wet-mount technique, Kato-Katz technique and formalin ethyl-acetate concentration technique. Structured questionnaires were administered to collect demographic characteristics, knowledge, attitudes, and management practices regarding intestinal parasitic infections. Statistical analysis was performed with R programmer version 4.4.2. The overall prevalence of Intestinal Parasitic Infections was 53.04%, with significantly higher rates in rural (56.06%) than urban areas (49.96%). *Ascaris lumbricoides* (28.73%) was the most prevalent parasite, followed by Hookworm (16.88%), *Strongyloides stercoralis* (14.50%). *Entamoeba histolytica* (12.11%) *Schistosoma mansoni* (10.29%), *Trichuris trichiura* (9.98%). *Taenia* species (7.34%) and *Giardia lamblia* (7.34%). The study highlights notable urban-rural disparities in knowledge, hygiene practices, and management of intestinal parasitic infections. Urban participant demonstrated higher awareness (94.92%) compared to rural participants (86.49%). Preventive measures were also more common in urban areas, where 73.94% had recently dewormed, compared to 53.40% in rural areas. Urban residents had greater access to hospitals (95%) than rural areas (29.10%). To reduce intestinal parasitic infections in children, the study recommends improving sanitation and safe water access, increasing health education, strengthening school deworming programs and rural healthcare.

Keywords: Prevalence, Intestinal Parasites, Infection, children, Knowledge, Attitudes, Management Practices.

INTRODUCTION

Intestinal parasitic infections (IPIs) remain among the most prevalent chronic health challenges worldwide, posing significant burdens, especially in low- and middle-income countries (Wafa, 2010). These infections are a major concern in public health, impacting approximately 450 million individuals globally—children being the most at risk (Odu *et al.,* 2013). Common IPIs include amoebiasis, giardiasis, ascariasis, hookworm disease, and trichuriasis (Opara *et al*., 2012). The incidence of these infections is particularly high in regions characterized by inadequate sanitation, especially in tropical zones of Africa, Asia, and South America (CDC, 2011). Although people of all ages may be affected, school-aged children are more vulnerable due to their frequent exposure to contaminated surroundings (Odu *et al*., 2013). Risk-enhancing behaviors include playing on contaminated ground, poor hand hygiene, insufficient toilet practices, and ingestion of contaminated food or water (Barbara *et al.,* 2011). Fecal-oral transmission is the primary mode of spread for most intestinal parasites (CDC, 2011), though certain parasites, such as those responsible for hookworm and schistosomiasis, can enter the body through skin contact with contaminated soil (Hassan *et al.,* 2014). Clinical manifestations of IPIs are diverse and may include abdominal discomfort, fever, fatigue, gastrointestinal disturbances, malnutrition, weight loss, rectal prolapse, sleep disruption, immune suppression, hepatosplenomegaly, and cognitive impairments (Ayeh-Kumi *et al.,* 2009). Prevalence rates across Nigerian states demonstrate considerable variability. For example, Mohammed *et al*. (2023) observed a 6.0% prevalence in Sokoto State, while Idowu *et al*. (2022) reported a much higher rate of 69.6% in Ogun State. Additional figures include 38.3% in Plateau (Barnabas *et al*., 2022), 27.22% in Adamawa (Pukuma *et al*., 2022), and 18.31% in Anambra State (Oluwaseun and Ekesiobi, 2024). Other studies in Anambra reported 35.2% (Aribodor *et al*., 2025), 12.5% (Nzeukwu *et al.*, 2022), and as high as 72% (Igbodika, Ekesiobi and Emmy-Egbe, 2014). In Imo State, documented prevalence rates include 19.3% (Ihejirika *et al*., 2023), 48.7% (Udensi *et al*., 2015), 24.8% (Oguoma *et al*., 2008), and 43.0% (Kamalu *et al*., 2013). Aribodor *et al*. (2012) noted that the

hand-to-mouth pathway, especially after touching surfaces contaminated with feces, significantly contributes to the spread. Poor sanitation, including the indiscriminate disposal of human and animal excreta, results in the contamination of water, food, and soil, thus facilitating transmission cycles (Ojurongbe *et al*., 2014). Furthermore, consumption of undercooked beef and water contaminated with sewage has been linked to taeniasis and other parasitic infections (Colan *et al*., 2011). Control strategies must go beyond pharmaceutical treatment; they require sustained behavioral change, improvements in sanitation infrastructure, and consistent access to safe water (Rollinson *et al*., 2013). Although anthelmintic agents such as Albendazole and Mebendazole are effective in eliminating helminths, the high rate of reinfection limits their long-term efficacy (Ihejirika *et al*., 2023). Campbell *et al*. (2014) advocate for a shift in public health focus toward preventive approaches, particularly through Water, Sanitation, and Hygiene (WASH) interventions.

MATERIALS AND METHODS

Study Area: The research was conducted in Imo State, Nigeria, between January, 2024 to February, 2025.

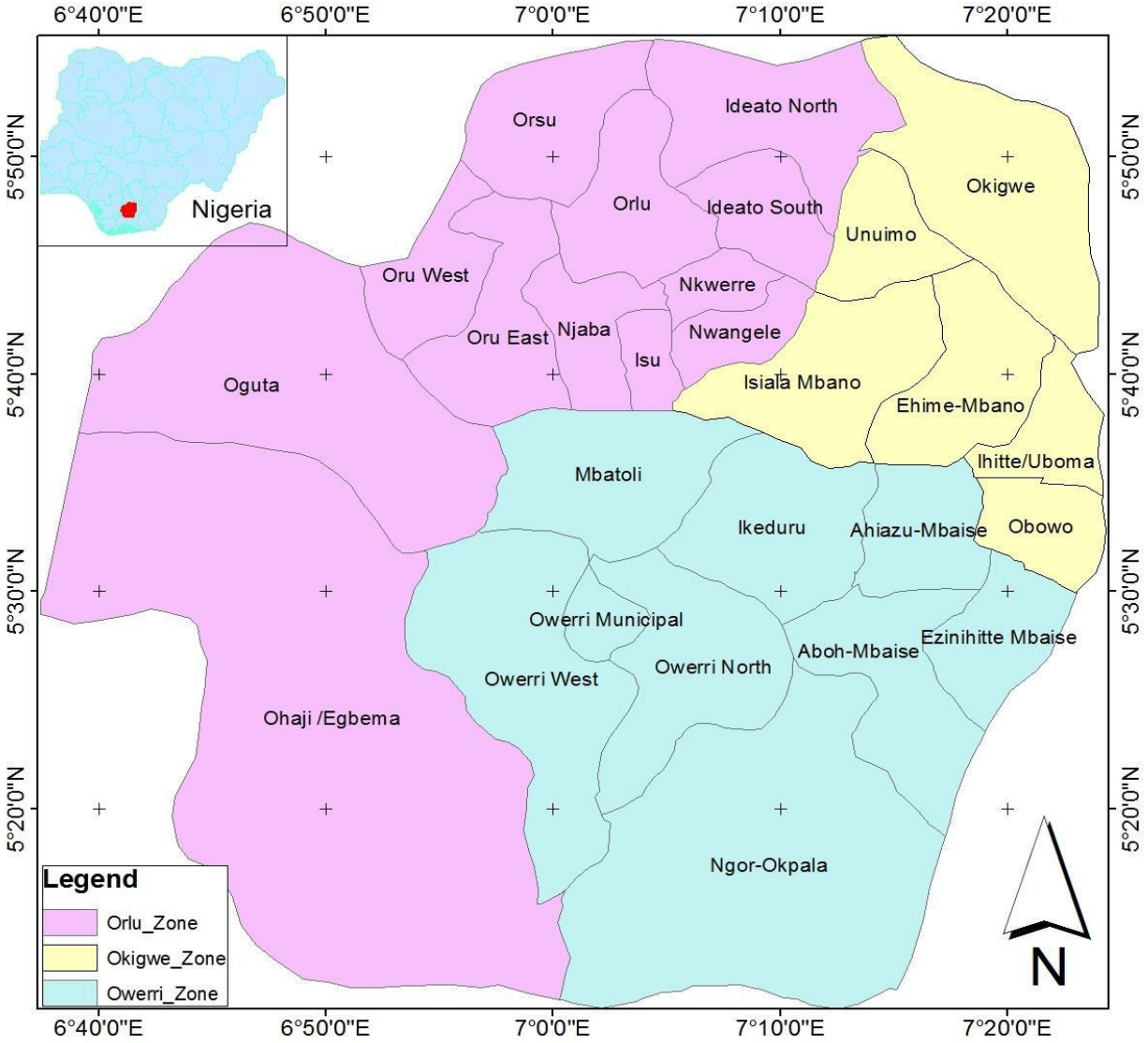

Figure 1: Map of Imo State showing Orlu zone and Owerri zones. **Source**: Ihejirika *et al*., (2023).

Study Population: The subjects used for this study were children within the age of 5-13 years old. In each of the study school, the head teacher provided the list of all the children within the ages of 5-13 years old in their schools, which was used to calculate the sample size for each study school.

Sample size and Sampling Technique: The sample size was calculated using Yamane (1967) formula for sample size determination as described in Lonas (2019). Simple random sampling technique was used to select the total number of 2,304 children between the ages of 5-13 years, from the study schools in urban and rural areas of Owerri and Orlu zones of Imo state. A well-structured questionnaire was used to collect demographic characteristics, knowl edge, attitudes, and management practices regarding intestinal parasitic infections.

Advocacy visit: Advocacy visit was made to the community heads of some of the communities visited to solicit for their support. Written informed consent was sought from the parents or guardians of selected pupils before commencement.

Ethical considerations: Ethical approval was obtained from the Ethical committee, Department of Public Health, Imo State Ministry of Health; and Ministry of Education, before the commencement of the study.

Inclusion criteria: Children within the age range of 5-13 years and whose parents or guardians consented were recruited in the study.

Exclusion criteria: Children above below 5 years and those whose parents did not consent were excluded in the study.

Stool sample collection and parasitological examinations: Each pupil was provided with a clean, dry, caped, well-labeled sample bottle for fresh faecal sample collection. The pupils were adequately instructed on how to get a little portion of their stool (approximately 5g) into the bottles. The class teachers were also educated to ensure full compliance. Sample collections was done in the morning in each of the selected Schools, each day. All stool samples were transported to Microbiology Laboratory, Department of Science Laboratory Technology, Imo State Polytechnic, for analysis. The collected stool samples were examined same day using Direct Wet-mount and Kato-katz techniques, as described by WHO (2019). And the remaining samples were immediately preserved

with 10% formalin, for further analysis using Formalin-ethyl acetate sedimentation technique described by WHO (2019).

Data Analysis: All statistical analysis were done using R version 4.4.2. (R Core Team, 2024). A Chi-square test for proportions was used to compare infection prevalence across different groups. In examining knowledge, attitude, and management practices regarding parasitic infections, descriptive statistics (frequency counts and percentages) were used to summarize findings for both urban and rural populations. Pearson's Chi-square tests were used to determine whether significant differences exist in knowledge, attitudes, and management practices between urban and rural populations.

RESULTS

The overall prevalence of intestinal parasitic infections (IPIs) across the study locations was 53.04%, with notable differences observed between zones and locality types (Table 1). In Owerri Zone, rural schools exhibited a higher infection rate (64.54%) compared to urban schools (51.80%). Conversely, in Orlu Zone, the prevalence was 48.13% in urban areas and slightly lower in rural areas at 47.78%. Statistical analysis revealed a highly significant difference in infection rates between urban and rural areas within Owerri Zone ($\chi^2 = 19.03$, df = 1, $p < 0.001$). However, no significant difference was observed between urban and rural areas in Orlu zone ($\chi^2 = 0.0034$, df = 1, $p = 0.953$).

Table 2 highlights the distribution of intestinal parasites across Owerri zone and Orlu Zones. In Owerri Zone, *Ascaris lumbricoides* emerged as the most prevalent parasite, recorded at 31.70% in urban areas and 39.72% in rural areas. Hookworm infections were also notably common, affecting 18.63% of urban and 21.81% of rural residents. Other frequently identified parasites in Owerri zone include *Strongyloides stercoralis* (14.71% urban, 15.60% rural), *Schistosoma mansoni* (8.99% urban, 15.60% rural), and *Entamoeba histolytica* (9.31% urban, 17.55% rural). A comparable pattern was observed in Orlu Zone, where *Ascaris lumbricoides* remained the predominant parasite, with prevalence rates of 19.73% in urban and 23.70% in rural areas. Hookworm infections were less frequent in Orlu zone compared to Owerri zone, with 12.41% in urban settings and 14.63% in rural areas. Other parasites, including

Trichuris trichiura and *Strongyloides stercoralis*, showed relatively stable occurrence across both urban and rural schools in Orlu zone. Notably, *Entamoeba histolytica* and *Giardia lamblia* were slightly more prevalent in Orlu zone, urban area than in Orlu zone, rural area, a reversal of the pattern was observed in Owerri zone.

Table 3, represents the knowledge of Intestinal Parasitic Infections among the Children. Urban residents demonstrated a higher level of awareness and understanding of intestinal parasites compared to their rural counterparts. A greater proportion of urban participants (94.92%) had heard of intestinal parasites compared to rural residents (86.49%). A higher percentage of urban respondents (61.78%) recognized that these infections are serious, whereas only 51.50% of rural participants acknowledged this fact. Awareness of transmission routes was also more pronounced in urban areas, where a larger percentage identified eating with soiled hands and fecal contamination as key modes of transmission. Conversely, rural participants exhibited more uncertainty, with 35.45% reporting that they did not know how intestinal parasites are transmitted. Similar disparities were observed in the knowledge of symptoms, with urban respondents being more aware of key indicators such as abdominal pain and diarrhea, while rural participants were more likely to be uncertain. Preventive knowledge followed the same pattern, with urban residents having greater awareness of hygiene-related preventive measures such as washing hands and drinking treated water, whereas rural residents showed higher uncertainty.

The analysis of Attitudes of the children towards prevention and treatment, as shown in Table 4, revealed that both urban and rural participants generally had positive attitudes, with no significant differences in willingness to take preventive measures, receive treatment, or visit a hospital. However, there were slight variations in handwashing practices, where rural residents were more likely to wash their hands only before eating (46.24%) compared to urban residents (49.71%). A higher percentage of rural respondents (9.79%) reported not knowing how often they should wash their hands, compared to 6.58% in urban areas. Despite these differences, the majority of respondents in both areas expressed a willingness to receive health education on intestinal parasitic infections.

Table 5 shows the management practices of intestinal parasitic infections among children in urban and rural areas of Imo

state. Management practices differed significantly between rural and urban populations, with urban residents being more proactive in preventive healthcare. A significantly higher percentage of urban participants (73.94%) had dewormed within the past month, compared to 53.40% in rural areas. Treatment-seeking behavior also varied, with urban residents more likely to visit a hospital (25.31%) compared to rural residents (6.17%), who predominantly relied on medicine stores and pharmacies (57.30%) or traditional treatments (36.36%). Access to healthcare facilities was another notable disparity; 95.00% of urban residents reported having a hospital in their community, while only 29.10% of rural respondents had similar access. Health education accessibility was also significantly different, with urban residents more likely to receive health education regularly (7.91%) compared to rural residents (2.99%), who primarily received information occasionally or rarely. Hygiene practices such as handwashing with soap and water after using the toilet were significantly more common in urban areas, where 7.24% always used soap and water compared to only 2.18% in rural areas. Rural residents were also more likely to play or walk barefoot outside (10.88%) compared to their urban counterparts (1.50%), potentially increasing their risk of infection.

Table 1: Overall Prevalence of Intestinal Parasitic Infections among children in Imo State.

Location	No. Examined	No. Infected	Prevalence	X^2	P-value
Owerri Zone					
Owerri Urban	612	317	51.80		
				19.03	< 0.001
Owerri Rural	564	364	64.54		
Orlu Zone					
Orlu Urban	588	283	48.13		
				0.0034	0.953
Orlu Rural	540	258	47.78		
Total	**2304**	**1222**	**53.04**		

df = 1

Table 2: Prevalence of Intestinal Parasites among children in Owerri zone and Orlu zone of Imo state.

Location	No. Examined	Hookworm	*Trichris trichiura*	*Ascaris lumbricoides*	*Taenia* species	*Strongyloi. stercoralis*	*Schisto. mansoni*	*Entamoeba histolytica*	*Giardia lamblia*
Owerri Zone									
Owerri Urban	612	114(18.63)	58(9.48)	194(31.70)	56(9.15)	90(14.71)	55(8.99)	57(9.31)	44(7.19)
Owerri Rural	564	123(21.81)	56(9.93)	224(39.72)	37(6.56)	88(15.60)	88(15.60)	99(17.55)	42(7.45)
Orlu Zone									
Orlu Urban	588	73(12.41)	59(10.03)	116(19.73)	46(7.82)	89(15.14)	46(7.82)	70(11.90)	49(8.33)
Orlu Rural	540	79(14.63)	57(10.56)	128(23.70)	30(5.56)	67(12.41)	48(8.89)	53(9.81)	34(6.30)
Total	**2304**	**389(16.89)**	**230(9.98)**	**662(28.73)**	**169(7.34)**	**334(14.50)**	**237(10.29)**	**279(12.11)**	**169(7.34)**

Table 3: **Knowledge of Intestinal Parasitic Infections among the Children.**

Characteristic	Rural Area	Urban Area	p-value[2]
	N = 1,103[1]	N = 1,201[1]	
Heard of intestinal parasites			<0.001
Yes	954 (86.49)	1,140 (94.92)	
No	149 (13.51)	61 (5.08)	

Characteristic	Rural Area	Urban Area	p-value[2]
	N = 1,103[1]	N = 1,201[1]	
Infections are serious			<0.001
Don't know	365 (33.09)	237 (19.73)	
No	170 (15.41)	222 (18.48)	
Yes	568 (51.50)	742 (61.78)	
Mode of transmission			<0.001
Don't know	391 (35.45)	399 (33.22)	
Eating with soiled hands	443 (40.16)	531 (44.21)	
Faecal contaminated food and water	61 (5.53)	120 (9.99)	
Skin penetrations	208 (18.86)	151 (12.57)	
Symptoms			<0.001
Abdominal pain	646 (58.57)	783 (65.20)	
Diarrhea	189 (17.14)	212 (17.65)	
Don't know	213 (19.31)	138 (11.49)	
Weight loss	55 (4.99)	68 (5.66)	
Prevention			<0.001
Don't know	298 (27.02)	278 (23.15)	
Drinking boiled treated water	289 (26.20)	351 (29.23)	
Washing fruits before eating	100 (9.07)	111 (9.24)	
Washing hands regularly	234 (21.21)	318 (26.48)	
Wearing shoes outside	182 (16.50)	143 (11.91)	
Can spread			0.009
Don't know	432 (39.17)	445 (37.05)	
No	58 (5.26)	102 (8.49)	
Yes	613 (55.58)	654 (54.45)	
Infection status			0.003
Negative	482 (43.70)	600 (49.96)	
Positive	621 (56.30)	601 (50.04)	

[1]n (%)

[2]Pearson's Chi-squared test

Table 4: Attitude towards Intestinal Parasitic Infections among the Children

Characteristic	Rural Area	Urban Area	p-value[2]
	N = 1,103[1]	N = 1,201[1]	
Willing to take prevention			0.4

Characteristic	Rural Area	Urban Area	p-value[2]
	N = 1,103[1]	N = 1,201[1]	
Yes	1,098 (99.55)	1,192 (99.25)	
No	5 (0.45)	9 (0.75)	
Willing to take treatment			0.3
Yes	1,023 (92.75)	1,100 (91.59)	
No	80 (7.25)	101 (8.41)	
Willing to visit hospital			0.2
Yes	823 (74.61)	924 (76.94)	
No	280 (25.39)	277 (23.06)	
Hand wash frequency			0.003
Always	449 (40.71)	464 (38.63)	
Don't know	108 (9.79)	79 (6.58)	
Only after using the toilet	36 (3.26)	61 (5.08)	
Only before eating	510 (46.24)	597 (49.71)	
Willing to receive health education			> 0.9
Yes	1,085 (98.37)	1,181 (98.33)	
No	18 (1.63)	20 (1.67)	
Infection status			0.003
Negative	482 (43.70)	600 (49.96)	
Positive	621 (56.30)	601 (50.04)	

[1]n (%)
[2]Pearson's Chi-squared test

Table 5: Management practices of Intestinal Parasitic Infections among the Children.

Characteristic	Rural Area	Urban Area	p-value[2]
	N = 1,103[1]	N = 1,201[1]	
Dewormed within one month			<0.001
Yes	589 (53.40)	888 (73.94)	
No	514 (46.6)	313 (26.06)	
Treatment health facility			<0.001
Hospital	68 (6.17)	304 (25.31)	
Medicine store pharmacy chemist	632 (57.30)	733 (61.03)	
Native treatment	401 (36.36)	163 (13.57)	
Spiritual healing	2 (0.18)	1 (0.08)	
Hospital in your community			<0.001

Characteristic	Rural Area	Urban Area	p-value[2]
	N = 1,103[1]	N = 1,201[1]	
Yes	321 (29.10)	1,141 (95.00)	
No	782 (70.9)	60 (5)	
Receive health education			<0.001
Occasionally	417 (37.81)	733 (61.03)	
Rarely	653 (59.20)	373 (31.06)	
Regularly	33 (2.99)	95 (7.91)	
Hand wash soap water after toilet			<0.001
Always	24 (2.18)	87 (7.24)	
Never	217 (19.67)	93 (7.74)	
Rarely	283 (25.66)	331 (27.56)	
Sometimes	579 (52.49)	690 (57.45)	
Wash fruits vegetables with water			<0.001
Always	8 (0.73)	48 (4.00)	
Never	131 (11.88)	44 (3.66)	
Rarely	201 (18.22)	223 (18.57)	
Sometimes	763 (69.17)	886 (73.77)	
Play walk barefooted outside			<0.001
Always	120 (10.88)	18 (1.50)	
Never	42 (3.81)	225 (18.73)	
Rarely	2 (0.18)	14 (1.17)	
Sometimes	939 (85.13)	944 (78.60)	

[1]n (%)

[2]Pearson's Chi-squared test; Fisher's exact test

DISCUSSION

The overall prevalence of intestinal parasitic infections in the study areas was 53.04%, with varying prevalence rates across different locations. The prevalence found in this study is higher compared with previous study conducted in Imo state, by Ihejirika, *et al*., (2023), where they reported overall prevalence of 19.3%. Oluwaseun and Ekesiobi, (2024) and Aribodor, *et al*., (2025) reported 18.31% and 35.2% respectively, in Anambra state. Idowu *et al*., (2022) reported 69.6% in Ogun State while Barnabas *et al*., (2022) reported 38.3% in Jos, Plateau State. These variations could be due to geographical settings differences, sanitation facility coverage, accessibility of safe water, and personal hygiene dissimilarity (Damtie *et al*., 2021).

A key observation from the findings of this study is the variation in prevalence between urban and rural area. In Owerri Zone, rural areas had a significantly higher prevalence (64.54%) compared to urban areas (51.80%), with a highly significant statistical difference ($X^2 = 19.03$, df = 1, $p < 0.001$). This pattern aligns with the report of Idowu *et al*., (2022), who reported a rural-urban difference in terms of prevalence of intestinal parasitic infections among children, suggesting that environmental and socioeconomic factors significantly influence infection rates. Conversely, in the Orlu Zone, prevalence rates were similar between urban (48.13%) and rural areas (47.78%), with no significant difference ($X^2 = 0.0034$, df = 1, $p = 0.953$). This lack of disparity implies that in certain regions, urban and rural areas may share similar risk factors, possibly due to comparable levels of sanitation and access to healthcare services. Supporting this observation, a study in Rwanda reported an overall Intestinal parasitic infection prevalence of 53.2% among children, with no significant difference between urban and rural settings, indicating that factors beyond urban-rural classification, such as hygiene practices and socioeconomic status, play crucial roles in infection rates (Hakisimana, *et al*, 2023).

In this study, *Ascaris lumbricoides* was the most commonly detected parasite, with a prevalence of 28.73%. This finding is consistent with other studies in different parts of Nigeria, (Ekesiobi (2025), Idowu *et al*., (2022), Udensi, *et al.,* (2015), Ihejirika, *et al*., (2023)), where *Ascaris lumbricoides* was found to be more prevalent. Hookworm infections were also notable, with a prevalence of 16.88%. This is in agreement with the reports of Okechukwu, *et al*., (2024) and Ngwamah *et al*., (2024). This could be as a result of children not wearing protective foot wears while playing outside or within the school premises. Other intestinal helminths identified are *Strongyloides stercoralis* (14.5%) *Schistosoma mansoni* (10.29%) *Trichuris trichiura* (9.98%), and *Taenia* Species (7.34%). This is consistent with the findings of Imalele *et al*. (2023),

Gbonhinbor *et al*., (2022), Damtie *et al*., (2021), Ihejirika *et al*. (2023). Igbodika, *et al.,* (2014). All of them recorded similar helminths parasites with varying prevalence. This shows that these parasites are common throughout the country where similar environmental conditions exist. The protozoan parasites, *Entamoeba histolytica* and *Giardia lamblia*, were also found in 12.11% and 7.34% of the study population, respectively. This finding is in agreement with earlier studies conducted in the geopolitical zones of Imo state (Udensi *et al.,* 2015).

The findings of this study revealed a significant disparity in Knowledge and understanding of intestinal parasites and modes of transmission, between urban and rural residents. Urban residents demonstrated a higher level of knowledge regarding these infections compared to their rural counterparts. This heightened awareness in urban areas may be attributed to better access to health education and information dissemination channels. In contrast, rural areas often face challenges such as limited healthcare infrastructure and educational resources. Studies have shown that rural areas often experience higher prevalence rates of intestinal parasitic infections, which can be linked to lower levels of awareness and inadequate sanitation infrastructure, which can impede the spread of vital health information (Mahmoud, *et al.*, (2025)).

The analysis of attitudes, towards prevention and treatment revealed that both urban and rural participants generally had positive attitudes, with no significant differences in willingness to take preventive measures, receive treatment, or visit a hospital. However, there were slight variations in handwashing practices, between urban and rural residents, where a higher proportion of rural participants reported washing their hands only before eating (46.24%) compared to their urban counterparts (49.71%). Additionally, a higher percentage of rural respondents (9.79%) were uncertain about the recommended frequency of handwashing, in contrast to 6.58% in urban areas. The importance of proper handwashing in preventing intestinal parasitic infections is well-documented. Studies have shown that inadequate handwashing practices are associated with a higher prevalence of such infections (Kassaw, *et al*., (2020); Ray, *et al*., (2009)). Despite these differences, the majority of respondents in both areas expressed willingness to receive health education on intestinal parasitic infections.

Management practices of intestinal parasitic infections in Imo state differed significantly between rural and urban populations, with urban residents being more proactive in preventive healthcare. In urban areas, a significantly higher percentage of participants (73.94%) had dewormed within the past month, compared to 53.40% in rural

areas. A study conducted in Imo State, Nigeria, reported a 19.3% prevalence of intestinal parasitic infections among school children aged 6-13 years, with urban households frequently utilizing anthelmintic medications such as Albendazole, Pyrantel pamoate, and Mebendazole for intermittent deworming (Ihejirika *et al*., 2023). According to Ihejirika *et al*., (2023), proactive deworming treatment is associated with a reduced prevalence of intestinal parasites, particularly among children dewormed every four months. Rural populations often face challenges such as limited healthcare infrastructure and reduced health education accessibility, which impede effective intestinal parasitic infection management. Research in Ebonyi State, Nigeria, revealed that while 86.7% of primary school children had good knowledge about intestinal parasites, the actual implementation of preventive practices was inconsistent (Alo *et al*., 2021). Factors such as inadequate sanitation facilities and reliance on contaminated water sources contribute to higher infection rates in rural areas. Moreover, traditional beliefs and limited access to healthcare services may lead to delayed or inappropriate treatment interventions (Alo *et al*., 2021). Remarkably, some studies have reported higher intestinal parasitic infection prevalence in urban settings. For instance, a survey in southern Malawi found a significantly higher prevalence of helminth infections among urban children (16.5%) compared to their rural counterparts (3.6%), primarily due to *Ascaris lumbricoides* infections (Phiri *et al*., 2000). This irony may be attributed to urban environmental factors such as overcrowding, inadequate sanitation, and the presence of open sewage, which facilitate the transmission of intestinal parasitic infections. The proactive attitude of urban residents towards maintaining good health, can be linked to better access to health education and services. Urban dwellers are more likely to engage in regular deworming programs and utilize healthcare facilities promptly upon recognizing symptoms. In contrast, rural residents may depend more on traditional remedies and may lack timely access to medical care, leading to continued infection durations and increased transmission in the communities.

CONCLUSION

The findings of this study indicate a high prevalence of intestinal parasitic infections among school children in the study areas of Imo State, with an overall infection rate of 53.04%. The prevalence varied across different locations, with rural areas generally exhibiting higher infection rates than urban areas. *Ascaris lumbricoide*s emerged as the most prevalent parasite, followed by Hookworm, *Strongyloides stercoralis*, and other intestinal parasites. Additionally, co-infections were common,

with a significant proportion of infected individuals harboring multiple parasite species. The findings of this study revealed a significant disparity in Knowledge and understanding of intestinal parasites and modes of transmission, between urban and rural residents. Urban residents demonstrated a higher level of knowledge regarding these infections compared to their rural counterparts. The analysis of attitudes towards prevention and treatment, revealed that both urban and rural participants generally had positive attitudes, with no significant differences in willingness to take preventive measures, receive treatment, or visit a hospital. Management practices of intestinal parasitic infections in Imo state differed significantly between rural and urban populations, with urban residents being more proactive in preventive healthcare. In urban areas, a significantly higher percentage of participants (73.94%) had dewormed within the past month, compared to 53.40% in rural areas.

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