



THE INTRICACIES OF BLITHE DUMPING OF SOLID WASTE: IS OUR HEALTH AT JEOPARDY?

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Abstract

The improper disposal of solid waste is a significant environmental and public health concern in Bida, Niger State. This study assesses the solid waste disposal practices and health implications of Bida residents. A survey research that applied 179 house questionnaire administration, and statistical packages was used in analyzing data based on the questionnaire administered with the adoption of convenient and stratification techniques. Purposive sampling was used to select 5 wards from 14 available wards for the study in order to collect the predicted data. The study revealed that most residents dispose of their waste through open dumping and burning, posing significant health risks thus establishes a strong correlation between poor waste disposal practices and the prevalence of waste-related diseases such as malaria, diarrhea, and respiratory infections and this was corroborated via the percentile analysis, valid indicators and inferences, that portend dangers to the health and environment as a whole, this invariably establishes that waste disposal practice is significantly influence healthy environment. The study concluded that it is only through the combined elements of human capital, prompt governmental efforts, and change in attitudinal behaviour, proper sanitation sensitization and monitoring are substantial sustainable paradigm to stimulate solid waste disposal practices towards attainment of efficient, safe and healthy environment. Overall, this study provides valuable insights into the complex issues surrounding solid waste disposal practices in Bida, highlighting the need for a comprehensive and sustainable approach disposal practice to enhance proper sanitation exercises so as to checkmate the spread of contagious disease.

Keywords: Blithe Dumping, Public Health, Residents, Sanitation, Solid Waste,

Introduction

Combating waste disposal menace in any urban localities has been perceived to be too cumbersome and demanding (Hassan, et al, 2023); khudyakova & Lyaskovaskaya, 2021) as the solid waste generation in urban areas has increased dramatically in recent years as a result of increasing population, urbanization, and improved lifestyles . According to the World Bank, MSW generated in urban areas is currently over 3.5 million tons per day, with that number predicted to rise to around 6.1 million tons per day by 2025 (Adobe stock, 2023). And unplanned placement of communal bins or garbage sites has resulted

endanger water resources, especially water sources like rivers and streams. In time, other groundwater sources including hand-dug wells and boreholes will also be impacted (Opoku et al, 2022).

Various societal variables, such as population growth and rapid socio-economic global development has contributed to the rapid expansion in supply and demand for goods and products over few decades which eventually led to the increased waste generation without effective waste disposal, new strategies are required to develop varied and flexible urban models of waste disposal; practices. Urbanization is currently one of the major contributors to solid waste output in most parts of the world (Ojo, 2025; Kenny & Prayadsrshin, 2021; Khudyakova & Lyaskovaskoya,, 2021). The added number via population increment into the area ought to have tackled by the concerned authority via increased efforts toward proper disposal of waste but reverse is the case as heaps of waste are at increase on daily basis in the our living environment which has been constituting urban decadence and increase hazardous diseases

In several countries in Sub-Saharan Africa, garbage collecting techniques like communal container collection methods appear to be the most prevalent (Opoku et al, 2022) and containers (trash bins) that are for drop-off their solid waste, rubbish collection vans and containers, are usually not protected before emptying the trash at authorized disposal sites thus aggravate the spread of associated contagious diseases

The population of Nigerian cities is growing very fast in the world due to the large influx of people from the rural areas due to the fact that every citizen in the country's rural areas wants to enjoy the facilities and utilities being provided in the urban centers. Meanwhile, man's activities in the world today is interacting with environmental resources which he utilizes for his food, shelter and clothing, involves generating by - products or wastes. The generation of wastes such as garbage, refuse, trash, junks etc. are consequences of materials being utilized by man (Padmanabhan & Barik,, 2019; Teshome, et al, 2022), thus led to waste overflow, ground dumping at collection sites, and unlawful storage areas (Alao, et al, 2021)). Solid waste disposal is a severe issue because, when burned, it can increase air pollution, and, when thrown in the open, it can contaminate the land, and water in the surrounding areas. The management of solid waste in developing countries faces a variety of challenges, such as a lack of finance and resources, technical challenges, lack of public awareness, and lack of coordination between various government agencies, the public and private sectors (Ojo, 2025 ; Saadeh et al, 2022).

However, our environment which is supposed to be a comfortable, pleasant and convenient place for living has become a dumping site, and this, has become the greatest concern of Nigerians, in that it has posed problems to the society, causing health hazards and disasters with resulted into loss of aesthetic value of the environment and indiscriminate disposals. Furthermore, an evident has buttressed the growing trend of waste generation that 140,000 tons of solid waste were generated in the city of London in 1970-1971 and a year after, the wastes had increased to about 180,000 tones (Ibrahim, et al, 2021), with that increase in waste generation therefore, necessitates the unveiling of the intricacies of Solid Waste Open Dumping in Bida Local Government Area, Niger State: Is our Health at Jeopardy? Hence Bida Local Government Area becomes the utmost concern to this research work to authenticate the quantities, types and paradigm of waste disposal so as to unravel the implications of such on the health fabrics of the resident and the adjoining environment.

constituents of SW can be grouped into: Non-biodegradable inorganic matter; and Biodegradable natural organic matter; Off specification and fire- and water-damaged chemicals of unknown composition and characteristics; Toxic organic compounds; Metals, metalloids and their derivatives; partially biodegradable natural organic matter (Ibrahim, *et al*, 2021; Godswill, *et al.*, 2022;). Biodegradability conceived as property that environmental conditions influences and the nature of appropriate consortia of microbes. the categories includes Construction industry and demolition waste;, Energy-generation waste; Municipal solid waste (domestic, market and trade wastes); Fuel production and Food, beverage and agro-industry waste; Amenity area and garden waste; Slurries from Intensive animal husbandry (animal manures); Slaughterhouse solid waste (including specified materials), catering industry waste; Forestry and forest product industry waste; and diseased carcasses; The major feature of any solid waste that makes it suitable for treatment is that it is either biodegradable or combustible, thereby dictating that such waste fractions must be organic in nature. Health implication and environment effects of waste according to (Hassan, *et al*, 2023) and groundwater contaminations Kenny & Priyadarshin, (2021) are worrisome situation that's requires urgent attention In fact, it is quite not surprising that most of our urban centers are turning into squalor and slums areas. Even in an ideal town or a well-equipped environment with a good road network and basic facilities and utilities, there is still this problem of maintenance of the environment and management of waste in relation to our health hazards

Solid Waste Sources, Contents and Composition

Solid waste comprises all the waste arising from human and animal activities in solid form (Debrah *et al*. 2021). The composition of municipal solid waste varies greatly from place to place and from time to time. It predominately includes food waste, household waste, market waste, packaging materials and products which are no longer useful.

Table 1 Solid Waste Sources and Content

Source	Typical Waste Generator	Solid Waste Contents
Residential	Single and multiple households/ dwellings	Food wastes, paper, cardboard, plastics, textiles, leather, yard wastes, wood, glass, metals, ashes, special wastes (e.g., bulky items, consumer electronics, batteries, oil, tires), and household hazardous wastes.
Commercial	Shops, Stores, Hotels, Restaurants, Markets, Office, Malls etc.,	Paper, cardboard, plastics, wood, food wastes, glass, metals, special wastes, hazardous wastes
Institutional	Schools, Hostels, Hospitals, Government and Private Office Complexes	Paper, cardboard, plastics, wood, food wastes, glass, metals, special wastes, hazardous wastes.

Source	Typical Waste Generator	Solid Waste Contents
Construction and Demolition Waste	Construction sites, road repairs, renovation sites, demolition of buildings	Wood, steel, concrete debris, glass, sand, tiles, bituminous concrete etc.
Municipal Services	Street Sweeping, landscaping, Cleaning of parks, beaches, other recreational areas	Street sweepings; drain silt; landscape and tree trimmings; wastes from parks, beaches, and other recreational area

Source: Debra, et al, 2021.

Methodology

This study used survey questionnaires as an instrument to collect data for the quantitative analysis as the study area is characterized by the compound housing system which makes it imperative to adopt alphabetical numbering system of each compound, followed by re-numbering of each house within a compound numerically, then, random selection of house was done for household questionnaire administration. The use of Geographical Information System (GIS) through various programmed - based software's have been employed in locating the major dumping sites on the map at various areas within the study area and statistical packages was used in analyzing data based on the questionnaire administered with the adoption of convenient and stratification techniques.

Purposive sampling was used to select 5 wards from 14 available wards for the study in order to collect the data. This is because the wards have higher population density, commercial activities and other locational advantages like presence of institution that generates waste on daily basis. The table below show a total number of (17) waste dump sites in the 5 selected wards within the Local Government area

Table 2: Table for 17 Dump Sites that fall within the Selected Wards

NUMBER	NAME OF WARDS	NUMBER OF DUMP SITES	PERCENTAGE OF NUMBER OF DUMPSITES (%)
1	Masaba A	6	35.29
2	Dokodza	4	23.53
3	Nasarafu	3	17.66
4	Masaga 1	2	11.76
5	Wadata	2	11.76
Total		17	100.00

Source: Author's Field Survey (2025).

In all 215 copies of questionnaire were distributed, 11 copies were not retrieved accounting for 5.12% while another 25 questionnaires were wrongly filled, mal-handed, tore, dirty and filled not up to 50% of the total listed questions (11.62%) thus, 179 copies of correctly administered and filled questionnaires were used for the analysis totally 83.26% of the total questionnaires administered (see table 3 Questionnaire distributions in the study area). Therefore, the study recorded 179 as correctly filled

answered questionnaire and this number of questionnaire retrieved is supported by Krejcie and Morgan, (1970) table of the acceptable number of questionnaire analyzable

Table 3: Questionnaire Distributions in the Study Area

Wards	House Numbers	Pilot Survey Sample & Retrieved	Main Survey Sampled	No of QSN Retrieved & Filled Correctly	Total % of QSN Retrieved
Masaba A	540	26	70	58	82.86
Dokodza	321	15	41	35	85.37
Nasarafu	367	14	44	39	88.64
Masaga 1	261	10	30	24	80.00
Wadata	261	10	30	23	76.67
Total	1750	75	215	179	83.26

Source: Field Survey, 2025

The itemized predicting indicators of variables that measures Solid Waste generation in Bida Community and Socio-economic Strata was based on the administered survey questionnaire that led to the formulation of hypothesis and variable to variable test. Therefore, for the quantitative method as applied, the application of tables, percentile and inferences were draw based on the households' questionnaire administered

The selection of sample size did not concentrate on number but it involved sampling size of specific resident with the aid of sampling techniques. The selected sampling techniques (convenient and stratification) were done quantitatively to enhance the equality of respondents and their potential knows-how to answer the questions and provide rich and relevant information for analysis and interpretation.

Analysis and Discussion

Statistical Significance of Health Related Problems

TABLE 4: Distribution of Typhoid Disease and Degree

LOCATION	OCCURRENCE OF TYPHOID								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Nasarafu	14	7.8%	7	3.9%	8	4.5%	12	6.7%	41	22.9%
Masaba A	11	6.1%	15	8.4%	13	7.3%	12	6.7%	51	28.5%
Masaga 1	16	8.9%	12	6.7%	4	2.2%	7	3.9%	39	21.8%
Dokodza	8	4.5%	7	3.9%	6	3.4%	5	2.8%	26	14.5%
Wadata	6	3.4%	4	2.2%	5	2.8%	7	3.9%	22	12.3%
TOTAL	55	30.7%	45	25.1%	36	20.2%	43	24.0%	179	100%

Source: Authors' Field Survey, 2025

The table 4: shows the statistical variation at various selected locations which actually show the distribution of degree of seriousness of typhoid. In Nasarafu ward, 7.8% of the respondents had the idea of the seriousness of typhoid within their area as it shows it to be very serious. 3.9% of those interviewed viewed the disease of typhoid to be serious while 4.5% and 6.7% of those interviewed claim not to have witnessed it at all and they viewed it not to be serious and not serious at all respectively. In Masaba A ward, 6.1% of the respondents viewed typhoid to be a very serious disease in the ward. 8.4% of the respondents indicate typhoid to be serious while 7.3% and 6.7% responded that the disease is “not serious and not serious at all” respectively.

In Masaga 1 ward, 8.9% of the respondents recognize the presence of seriousness of typhoid while 6.7% of the respondents claimed to have just heard about the degree of seriousness. However, 2.2% of the respondents viewed the disease not to be a serious one while 3.9% of the respondents indicate that the presence of the disease is not serious at all. In Dokodza ward, 4.5% of the respondents indicated that the presence of the disease is very serious, and 3.9% of the respondents admitted that the presence of the disease is serious. Also 3.4% of the interviewee indicates that the presence of the disease is not serious while 2.8% of the respondents had no idea at all about the disease. In Wadata ward, 3.4% of the respondents indicated that the presence of the disease is very serious, while 2.2% of the respondents admitted that the presence of the disease is serious. Also 2.8% of the interviewee indicated that the presence of the disease is not serious while 3.9% of the respondents had no idea at all.

The implication of the statistical report is that 55.8% of the respondents were able to confirm the presence of the typhoid disease in Dokodza which might have been the consequences from open dump sites, dirty environment and odor generated from the various dumping sites. A total percentage of 20.2% of the respondents ascertain the presence of typhoid disease as not serious while 24.0% of the respondents indicated that the presence of the disease is not serious at all.

TABLE 5: Location Distribution of Dysentery Disease and Degree

LOCATIO N	OCCURRENCE OF DYSENTERY								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	F req	%	F req	%	F req	%	F req	%	F req	%
Nasarafu	6	3.4 %	1 5	8.4 %	1 1	6.1 %	9	5.0 %	4 1	22. 9%
Masaba A	1 9	10. 6%	1 1	6.1 %	1 2	6.7 %	9	5.0 %	5 1	28. 5%
Masaga 1	1 4	7.8 %	1 0	5.6 %	7	3.9 %	8	4.6 %	3 9	26. 9%
Dokodza	1 0	5.6 %	4	2.2 %	7	3.9 %	5	2.8 %	2 6	14. 5%

Wadata	5	2.8 %	5	2.8 %	8	4.5 %	4	2.2 %%%	2	12. 3%
TOTAL	5 4	30. 2%	4 5	25. 1%	4 5	25. 1%	3 5	19. 6%	1 79	100 .0%

Source: Author's Field Survey, 2025

The table 5 shows the statistical variation in the location distribution of dysentery disease. In Nasarafu ward, 3.4% of the respondents had the idea of the seriousness of dysentery within their area such that it indicated it to be very serious, 8.4% of the respondents viewed dysentery to be serious while 6.1% of the respondents indicated that the presence of the disease is not serious and 5.0% of the respondents had no idea of the disease at all. In Masaba A ward, 10.6% of the respondents indicated that dysentery disease is very serious, 6.1% of the respondents indicated it to be serious while 6.7% and 5.0% responded that the disease is not serious and not serious at all respectively. In Masaga 1 ward, 7.8% recognized the presence of dysentery to be very serious while 5.6% of the respondents have seen it to be serious. 3.9% of the respondent responded that the disease is not serious in their area, while 4.6% of the respondents indicated that the disease is not serious at all. In Dokodza ward, 5.6% of the respondents indicated that the incidence of the disease is very serious, while 2.2% of the respondents admitted that the presence of the disease is serious. Again, 3.9% of the interviewee indicates that the presence of the disease is not serious while 2.8% of the respondents had no idea at all about the disease. In Wadata ward, 2.8% of the respondents indicated that the presence of the diseases is very serious, while 2.8% of the respondents admitted that the incidence of the diseases is serious, and 4.5% of the interviewee indicated that the incidence of the disease is not serious. 3.9% of the respondents had no idea at all.

The implication of the statistical report can be seen through the table and figures. The percentage of respondents that confirm the incidence of dysentery disease in all the selected wards is 30.2%, while 25.1% of the respondent were able to establish the incidence of dysentery disease as serious, 25.5% of the total respondents indicated that the incidence of the disease is not serious while 19.6% of the respondents indicated that the incidence of the disease is not serious at all. This is an indication that the incidence of dysentery in the selected ward is high.

TABLE 6 Locational Distribution of Malaria Disease and Degree

LOCATION	OCCURRENCE OF MALARIA								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Nasarafu	10	5.60%	12	6.70%	11	6.10%	8	4.50%	41	22.90%
Masaba A	24	13.40%	11	6.10%	13	7.30%	3	1.70%	51	28.50%
Masaga 1	21	11.70%	8	4.50%	6	3.40%	4	2.20%	39	21.80%
Dokodza	12	6.70%	7	3.90%	6	3.40%	1	0.60%	26	14.50%
Wadata	7	3.90%	7	3.90%	6	3.40%	2	1.10%	22	12.30%
TOTAL	74	41.30%	45	25.10%	42	23.50%	18	10.10%	179	100%

Source: Author's Field Survey, 2025

The table 6 shows the statistical variation in the location distribution of malaria in all the wards. In Nasarafu ward, 5.6% admitted that malaria is very serious while 6.7% of the respondents admitted that malaria disease is serious 6.1% and 4.5% of the respondents responded that the disease is not serious and not serious at all respectively. In Masaba A ward 13.4% of the respondents indicated a very serious state of the incidence of malaria, while 6.1% of the respondents indicated that the incidence of malaria is serious. Again, 7.3% of the respondents confirmed that the incidence of the disease is not serious while 4.5% of the respondents indicated that the disease is not serious at all. In Masaga 1 ward, 11.7% of respondents are of the opinion that the incidence of malaria is very serious, while 4.5% of the respondents indicate that the incidence of the disease is serious, and 3.4% of the respondents confirmed that the disease is serious. 2.2% claimed that the disease is not serious at all in the area. In Dokodza ward, 6.7% of the respondents admitted that the disease is very serious, while 3.9% indicated that the incidence of malaria is serious. Again, 3.4% and 0.6% of the respondents reported that the incidence of malaria is not serious and not serious at all respectively. Wadata ward was actually different in that 3.9% of the respondents indicated that it's very serious while 3.9% of the respondents admitted that the disease is serious. However, 3.4% of the respondents admitted that the disease is not serious and 1.1% of the respondents definitely had no idea of the incidence of the diseases. The statistical report shows that about 41.3% and 25.1% of the respondents viewed the incidence of malaria to be very serious and serious respectively while 23.5% indicated that it is not serious and 10.1% had no idea about the presence of malaria in their areas at all. This shows that a larger percentage of the respondents in the entire selected ward admitted the incidence of the diseases but the degree of seriousness varies.

The implication of the statistical report can be seen through the table and figures. The percentage of respondents that confirm the incidence of dysentery disease in all the selected wards is 30.2%, while 25.1% of the respondent were able to establish the incidence of dysentery disease as serious, 25.5% of the total respondents indicated that the incidence of the disease is not serious while 19.6% of the respondents indicated that the incidence of the disease is not serious at all. This is an indication that the incidence of dysentery in the selected ward is high.

TABLE 7 Degree of Seriousness of Malaria Disease and Degree

LOCATION	OCCURRENCE OF MALARIA								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Nasarafu	10	5.60%	12	6.70%	11	6.10%	8	4.50%	41	22.90%
Masaba A	24	13.40%	11	6.10%	13	7.30%	3	1.70%	51	28.50%
Masaga 1	21	11.70%	8	4.50%	6	3.40%	4	2.20%	39	21.80%
Dokodza	12	6.70%	7	3.90%	6	3.40%	1	0.60%	26	14.50%
Wadata	7	3.90%	7	3.90%	6	3.40%	2	1.10%	22	12.30%
TOTAL	74	41.30%	45	25.10%	42	23.50%	18	10.10%	179	100%

Source: Author's Field Survey, 2025

The table 7 shows the statistical variation in the location distribution of malaria in all the wards. In Nasarafu ward, 5.6% admitted that malaria is very serious while 6.7% of the respondents admitted that

malaria disease is serious 6.1% and 4.5% of the respondents responded that the disease is not serious and not serious at all respectively. In Masaba A ward 13.4% of the respondents indicated a very serious state of the incidence of malaria, while 6.1% of the respondents indicated that the incidence of malaria is serious. Again, 7.3% of the respondents confirmed that the incidence of the disease is not serious while 4.5% of the respondents indicated that the disease is not serious at all. In Masaga 1 ward, 11.7% of respondents are of the opinion that the incidence of malaria is very serious, while 4.5% of the respondents indicate that the incidence of the disease is serious, and 3.4% of the respondents confirmed that the disease is serious. 2.2% claimed that the disease is not serious at all in the area.

In Dokodza ward, 6.7% of the respondents admitted that the disease is very serious, while 3.9% indicated that the incidence of malaria is serious. Again, 3.4% and 0.6% of the respondents reported that the incidence of malaria is not serious and not serious at all respectively. Wadata ward was actually different in that 3.9% of the respondents indicated that it's very serious while 3.9% of the respondents admitted that the disease is serious. However, 3.4% of the respondents admitted that the disease is not serious and 1.1% of the respondents definitely had no idea of the incidence of the diseases. The statistical report shows that about 41.3% and 25.1% of the respondents viewed the incidence of malaria to be very serious and serious respectively while 23.5% indicated that it is not serious and 10.1% had no idea about the presence of malaria in their areas at all. This shows that a larger percentage of the respondents in the entire selected ward admitted the incidence of the diseases but the degree of seriousness varies.

TABLE 8 Locational Distribution of Diarrhea Disease and Degree

LOCATION	OCCURRENCE OF DIARRHEA								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Nasarafu	4	2.20%	12	6.70%	11	6.10%	14	7.80%	41	22.90%
Masaba A	13	7.30%	15	8.40%	12	6.70%	11	6.10%	51	28.50%
Masaga 1i	10	5.60%	12	6.70%	14	7.80%	3	7.70%	39	21.80%
Dokodza	8	4.50%	6	3.40%	8	4.50%	4	2.20%	26	14.50%
Wadata	2	1.10%	4	2.20%	10	5.60%	6	3.40%	22	12.30%
TOTAL	37	20.70%	49	27.40%	55	30.70%	38	21.20%	179	100%

Source: Author's Field Survey, 2025

The table 8 shows the statistical variation in the location distribution of diarrhea. In Nasarafu ward, 2.2% of the respondents indicate the incidence of diarrhea to be very serious, while 6.7% of the respondents admitted that the incidence of the disease is serious. 6.1% of the respondents in this particular ward responded that the disease is not serious while 7.8% of the respondents indicated that the disease not serious at all. Within Masaba A ward, 7.3% of the respondents indicated that the incidence of diarrhea is very serious while 8.4% of the respondents ascertained that the incidence of the disease is serious, and 6.7% of the respondents responded that the incidence of the disease is not serious. 6.1% of the respondents in Masaba A ward however admitted that they have not witness such problem/ In Masaga 1

ward, 5.6% of the interviewee indicated that diarrhea disease is very serious, while 6.7% of the respondents expressed that the disease is serious, and 7.8% of the respondents admitted that the disease is not serious. 7.7% of the respondents responded that it is not serious at all.

In Dokodza ward, among the respondents, 4.5% admitted that the incidence of diarrhea is very serious, while 3.4% of the respondents indicated that the incidence of the disease is serious. Also, 4.5% and 2.2% respectively indicated that the incidence of the disease is not serious and not serious at all. In Wadata ward, the situation is different in that 1.1% of the respondents admitted that the disease is very serious, 2.2% of the respondents expresses that the disease is serious, while 5.6% of the respondents admitted that diarrhea is not serious and 3.4% of the respondents indicated that they have no idea about the disease at all.

The implication of the variation is that 20.7% of respondents in all the selected wards was of the opinion that the incidence of diarrhea is very serious while 27.4% actually felt the case of diarrhea is serious and the percentage of those respondents that indicated that the disease was not serious was 30.7% and that of those who had no idea at all was 21.2%.

TABLE 9 **Locational Distribution of Skin Disease and Degree**

LOCATION	OCCURRENCE OF SKIN DISEASE								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Nasarafu	8	4.50%	7	3.90%	14	7.80%	12	6.70%	41	22.90%
Masaba A	5	2.80%	8	4.50%	18	10.00%	20	11.20%	51	28.50%
Masaga 1	7	3.90%	13	7.30%	12	6.70%	7	3.90%	39	21.80%
Dokodza	8	4.50%	6	3.40%	10	5.60%	2	1.10%	26	14.50%
Wadata	1	0.60%	6	3.40%	11	6.10%	4	2.20%	22	12.30%
TOTAL	29	16.30%	40	22.50%	65	36.20%	45	25.10%	179	100%

Source: Author's Field Survey, 2025

The table 9 shows the statistical variation in the location distribution of skin diseases in all the wards. In Nasarafu ward, 4.5% of the respondents admitted that the incidence of skin disease is very serious, 3.9% indicated that the disease is serious, 7.8% of the respondents ascertained that the disease is not serious in their area while 6.7% of the respondents clearly responded that the disease is not serious at all. In Masaba A ward, 2.8% of the respondents responded that the incidence of skin disease is very serious, 4.5% indicated that the disease is serious while 10% admitted that the disease is not serious and 11.2% of the respondents responded not to have witnessed or seen any case of skin diseases at all.

In Masaga 1 ward, 3.9% of the respondents eventually responded that the incidence of skin diseases is very serious, 7.3% of the respondents indicated that the disease is serious, 6.7% admitted that the incidence of skin diseases is not serious while 3.9% of the respondents actually have not seen the case of skin diseases at all. In Dokodza ward, 4.5% of the respondents admitted that the incidence of skin disease is very serious, 3.4% of the interviewee responded that the disease is serious, 5.6% of respondents have indicated that the disease is not serious while 1.1% of the respondent have not heard about the disease at all. In Wadata ward, 0.6% of the respondents admitted that the case of skin disease is very serious, 3.4%

indicated that the disease is serious while 6.1% and 2.2% have not seen the case of skin disease and have no idea about the disease at all.

The inference from the statistical variation on the location distribution of skin disease within the study area is that 16.3% of all the respondents in all the wards indicated that the case of the disease is very serious, 22.5% of the respondent admitted that the disease is serious while 36.2% and 25.1% of the respondents had little and no idea about the disease at all.

TABLE 10: Occurrence of Cholera Disease and Degree

LOCATION	OCCURRENCE OF CHOLERA								TOTAL	
	VERY SERIOUS		SERIOUS		NOT SERIOUS		NOT SERIOUS AT ALL			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Nasarafu	5	2.80%	23	12.80%	9	5.00%	4	2.20%	41	22.90%
Masaba A	13	7.30%	18	10.10%	11	6.10%	9	5.00%	51	28.50%
Masaga 1	13	7.30%	12	8.70%	2	1.10%	12	6.70%	39	21.80%
Dokodza	8	4.50%	14	7.80%	3	1.70%	1	0.60%	26	14.50%
Wadata	6	3.40%	10	5.60%	3	1.70%	3	1.70%	22	12.30%
TOTAL	43	25.20%	77	43.00%	25	15.60%	29	16.20%	179	100%

Source: Author's Field Survey, 2025

The table 10 shows the statistical variation in the location distribution of incidence of cholera. In Nasarafu ward, 2.8% of the respondents indicate that the occurrence of cholera is very serious while 12.8% of the respondents admitted that the disease is serious, 5.0% of the respondents in this particular ward confirmed that the disease is not serious while 2.2% indicated that the disease is not serious at all. Within Masaba A ward, 7.3% of the respondents indicated that the incidence of cholera is very serious, 6.1% of the respondents responded that the occurrence of the disease is not serious, 10.1% of the respondents confirmed that the occurrence of the disease is serious while 2.2% responded that the disease is not serious at all. Masaga 1 ward, 7.3% of the interviewee indicated that incidence of cholera disease is very serious, 8.7% claimed that the disease is serious, 1.1% responded that the disease is not serious while 6.7% of the respondents responded that the disease is not serious at all. In Dokodza ward, 4.5% of the respondents claimed that the incidence of cholera is very serious, 7.8% of them responded that the disease is serious, 1.7% testified that the disease is not serious while 12.3% of the respondents claimed that the disease is not serious at all. In Wadata ward, the situation appeared different in that 3.4% of the respondents admitted that the incidence of the disease is very serious, 5.6% claimed that the disease is serious, while 1.7% admitted that the disease is not serious and 1.7% of the respondents testified that the incidence of cholera is not serious at all.

The inference from the variation is that 25.2% of the respondents in the entire selected ward were of the opinion that the occurrence of cholera is very serious while 43.0% felt that the incidence of cholera is serious, and 15.6% testified that it is not serious. However, 16.2% claimed that the incidence of the disease is not serious at all and this underscores the fact that they have no idea of the disease at all.

Conclusion

There is a gloomy sign of illegal dumping of waste as identified in the study area, the unsorted waste dumping in large amount has affected the quality of life and there is little or no awareness to local resident on the efficacy of proper waste disposal practices, the re-activation of the door to door waste collection that could improves, encourage and motivates active local participation in waste recycling, conservation and development of their community were completely neglected.

The implication here is that, the shocks increase thereby ravishing the health potential in Bida community as revealed by the research.

Recommendation

- ❖ The creation of “The waste network committee” that should be help the residents monitor and evaluate their economic opportunities derivable from waste sorting, re-use and recycle with adequate information, via conduct symposium, seminars and conference in providing waste disposal practices training and education. This would go a long way in checkmating open dumping syndrome as characterized with the study area and thus assist in creating additional job opportunities.
- ❖ Bida Local Government should create a blue prints on “Sustainable Disposal Plan” in order to guide future waste dumping carelessly as presently there exist no concrete agenda anchor on such other than haphazard and uncontrolled waste dumping exercise. The blue print must be sustainable and should be all embracing with adequate information on waste generation, arising from demographic data, past antecedents and motives to inform future planning. This plan formulating process if encouraged shall eventually result in diversifying or increasing employment opportunities, reduce health hazard and wastage of resource on medical bill and improve productivities
- ❖ Application of Systemic Planning Strategies which has the potential to bring about a number of positive social benefits to a community. Planning and strategizing as identified serves as a vehicle for new ideas which in turn brings about new skills.
- ❖ At the household-level proper segregation of waste has to be done and it should be ensured that all organic matter is kept aside for composting, which is undoubtedly the best method for the correct disposal of this segment of the waste. In fact, the organic part of the waste that is generated are more easily, attracts insects and causes disease. Organic waste can be composited and then used as a fertilizer.
- ❖ Promoting the use of less hazardous alternatives to hazardous chemicals during production of goods and lastly, collection of hazardous waste at collection points must be safe, secure and performed in an environmentally sound manner.

Declaration

The authors hereby declared as follows:

- i) Availability of Data and Materials : Not Applicable
- ii) Competing Interest : Not Applicable
- iii) Authors Contribution: Increasing the body of knowledge on novels regarding the health implication of unkempt environment as a result of carefree dumping of waste is one of the

motives of the authors in carrying out this research. Also, the authors were able to educate the resident on the dangers attached to open dumping and the health implication which if not controlled can lead to loss of resource on medication, frequent visit to hospital for medical consultation and treatment, dwindling resources and loss of life. In spite of that, the authors were also able to sensitize the resident that 'waste can become wealth if adequate precaution, education and training is given on how and what to recycle at when and most especially were to recycle it. Overall, the authors provide valuable insights into the complex issues surrounding solid waste disposal practices in Bida, highlighting the need for a comprehensive and sustainable approach disposal practice to enhance proper sanitation exercises so as to checkmate the spread of contagious diseases.

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