

Sanitary Practices Adopted by Traders in Ogige Market in Nsukka Urban, Enugu State

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Abstract

Good sanitary practice is a key to public intervention for improvement of health and wellbeing of any individual and society at large. The purpose of this study was to determine the sanitary practices of traders in Ogige market Nsukka. Two specific objectives with two corresponding research questions and two null hypotheses were formulated to guide the study. The descriptive cross-sectional survey research design was used for the study. The instrument for data collection was a researcher designed sanitary practices questionnaire (SPQ). The population for the study consisted of all traders in Ogige market Nsukka which totalled about 3500. The sample for the study consisted of three hundred and fifty traders. Frequencies and percentages were used to answer the research questions while chi-square statistic was used to test the null hypotheses. The result of the study showed that only (35.2%) of the traders used buckets with lids to collect wastes in their different shops. The result also revealed that only (3.4%) of traders disposed of their collected wastes daily while (79.5%) dumped the collected waste in the ESWAMA bin. More than half of the respondents (51.0%) believed that the lack of dumpsites was a factor that affected sanitation practices. There was no significant difference in the method of refuse collection and in the place of dumping refuse based on gender. ($p > .05$). It was therefore recommended that there is need for the sanitation unit to have supervisors who should be in charge of the various blocks of shops who will ensure that every trader has a bucket with lid for refuse collection. The local market authority should provide litter bins at end of every block of shops so that traders can empty their refuse daily before they are finally emptied at the dumpsite. This will reduce indiscriminate dumping of refuse in gutters or drains.

Keywords: Sanitary, Practices, Traders, Nsukka Urban, Market

Introduction

All over the world, poor environmental sanitation is increasingly recognized as a major threat to human survival and also to the social and economic development of any community. There is evidence of the overwhelming problem of sanitation in markets and abattoirs which includes improper refuse disposal, inadequate water supply, inadequate supply of sanitary facilities that result in open defecation, overcrowding, exposure of food to flies, rodents and contaminants (Federal Ministry of Environment [FMOE], 2005). The Federal Ministry of Environment further attributed these problems to improper planning of markets and abattoirs, lack of provision of adequate facilities such as potable water, inadequate road networks, negative attitude of some traders, institutional regulations, enforcement and monitoring and above all, corrupt and sharp practices by the supervisors of markets and abattoirs. Since then there has been no visible and concrete framework, plan and commitment in Nigeria towards meeting the Sustainable Development Goal (SDG) 6 that seeks to eradicate open defecation by 2030 (Eremutha et al., 2016). The authors further stated that the situation has also become worse due to the economic depression in the country. However, in some states measures are taken by the state ministry of environment to prevent the spread of diseases in the market environment.

In developed countries such as the United States and Central Europe, sanitation and hygiene-related diseases have significantly reduced, however in developing countries, sanitation services are still severely lacking. Nigeria is one of the developing countries in sub-Saharan Africa whose records on sanitation practices by the citizens remain very poor (Fagbemiro et al., 2016). The authors stated that Nigerian cities, in particular, are fraught with squatter-settlements, breakdown of waste disposal management, air and water pollution and inadequate water and sanitation services. The market places are not left out in the above description. It is common to see mountains of refuse at the market places. These mountains of refuse provide breeding grounds for vectors of communicable diseases. Another common feature of our markets is the unavailability of sanitary facilities such as potable water, toilets and refuse disposal bays (Abejegah et al., 2013).

The sanitary practices adopted by the traders in the market will go a long way in determining the condition of the market environment. There is however evidence of poor sanitary practices by traders which includes collecting waste with inappropriate containers, allowing collected waste to stay for so long before disposing of it in the central collection area, dumping of refuse in gutters or drains, urinating or defecating in corners of shops or

gutters. Abejegah et al. (2013) in their study on market sanitation in Edo-State reported that despite the high level of awareness of the traders concerning the associated hazard of poor solid waste management, the practice of solid waste management was poor as the majority of the traders practised open dumping method of waste disposal. Numerous studies have also shown that the incidence of many diseases is reduced when people have access to and make regular use of adequate sanitary installations (Aremu, 2012).

Sanitation is important for all, helping to maintain health and increase life span. The word sanitation refers to the maintenance of hygienic conditions through services such as garbage collection and wastewater disposal (Caincross et al., 2010). Sanitation is also defined as a way of life that is expressed in the clean home, farm, business, neighbourhood and communities. Sanitation could also be described as the process where people demand, effect and sustain a hygienic and healthy environment for themselves and others by erecting barriers to prevent the transmission of disease agents to lay the foundation for sustainable development. Sanitation is a global development priority and the subject of Sustainable Development Goal 6 (WHO & UNICEF, 2017). Poor sanitary practices are linked to transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid, polio and stunted growth in children (WHO, 2019). It is, therefore, necessary to say that sanitation involves both practices and facilities working together to produce a hygienic environment.

Practice implies doing something customarily, or habitually or to do or perform often. Practice is defined as any customary action or proceeding regarded as individual's habit (Aurang et al., 2017). One of the goals of health education is practice or action. To buttress the above statement, Ademuwagun et al. (2002) stated that the goal of health education is positive health practice and not mere knowledge. Good sanitary practice is, therefore, a key to public intervention for improvement of health, wellbeing and productivity of an individual. Almost daily people go to the market to buy goods and services from traders to satisfy some of the basic human needs this makes it imperative for traders to adopt good sanitary practices.

Traders are described as people who are involved in buying and selling of goods and services. They are responsible for making goods and services available to buyers or consumers. Traders are indeed in the market to make money but it is important to note that markets cannot function without the active participation of traders (Motilal, 2015). Motilal stated that amongst other roles, traders help in reducing the market through high volumes and also helps in preventing acute market crashes. Adopting good sanitary practices by traders will go a long way to determine that buyers or consumers get their goods and services in the market in a most hygienic way.

A market is a known place where business transactions take place. Will (2020) defined the market as a place where two parties can gather together to facilitate the exchange of goods and services. The parties involved are usually buyers and sellers. Ogige market is situated in the heart of Nsukka urban. In Ogige market, there are many sections and units, depending on the type of business, though not all the sections are unitary since some areas have mixed marketers selling varieties of goods. The market has gates though not fenced. The market has an opening and closing periods, there is no public water supply facility presently, as the only borehole serving the market is non-functional. The market is served by four, fee-paying toilet facilities located at different places within the market environment. On the maintenance of cleanliness of the environment in the study market, the market chairman revealed that all the traders in the market carry out general cleaning of the market and its environs three times yearly. She further revealed that there is a functional sanitation unit made up of twelve persons who are responsible for supervising the cleanliness of the market environment. Despite all these, heaps of refuse are found within and around the market environment, spoilt unsold fruits and vegetables dumped inside gutters, nursing mothers dump used diapers carelessly others resort to open defecation, urinating inside buckets in the shops and urinating at close distances where minimal privacy is guaranteed.

Certain factors affect sanitation practices and they include inadequate resources and negative attitude towards sanitation (Moyo & Moyo, 2017). Amongst the socio-demographic factors that affect sanitation practices are gender, age and level of education. In this study, the issue of gender was examined. More often than not, females have been shown to have a higher environmentally conscious attitude and practice than men. This is because they are called upon more than their male counterparts to perform maintenance tasks at home or in market places. Raudsepp (2001) found out that women were significantly more likely than men to be concerned with environmental problems. This study will be of great benefit to the individual traders, local market authority and public health educators. The individual traders will benefit by understanding that certain practices they indulge in do not promote good health and thereby imbibe a behaviour change. The local market authorities will also benefit by getting acquainted with the factors that affect good sanitation practices among the traders and how they can be tackled. Public health educators will through this study know how to advise traders on good sanitation practices that will help in promoting their health and that of their customers.

The study was carried out in Ogige market Nsukka Urban. Nsukka Urban is the headquarter of Nsukka local government area in Enugu state. Other towns that makeup Nsukka urban are Edem-Ani, Ibagwa-Ani, Opi, Ede-Oballa and Obimo. The urban town has a population of 309, 448 and an area of 49,130m² and largest urban centre in the region. It is also where the main campus of the University of Nigeria is located. Ogige market is the major market serving the people in Nsukka and it operates daily. The study, therefore, seeks to find out the sanitary practices adopted by traders in Ogige market, Nsukka Urban.

Purpose of the Study

The purpose of the study was to ascertain the sanitary practices adopted by traders in Ogige market. Specifically, the study sought to find out the

1. sanitary practices adopted by traders in Ogige market, Nsukka.
2. factors affecting sanitation practices adopted by traders in Ogige market Nsukka.
3. sanitary practices adopted by traders in Ogige market based on gender.

Research Questions

The following research questions were posed to guide the study:

1. What are the sanitary practices adopted by traders in Ogige market Nsukka?
2. What are the factors affecting sanitation practices adopted by traders in Ogige market Nsukka?
3. What are the sanitary practices adopted by traders in Ogige market based on gender?

Hypotheses

The following null hypothesis was postulated and tested at .05 level of significance

1. There is no significant difference in the method of refuse collection adopted by traders in Ogige market Nsukka based on gender.
2. There is no significant difference in the place of dumping refuse adopted by traders in Ogige market Nsukka based on gender.

Methods

Research Design: The study adopted a descriptive cross-sectional survey research design. A cross-sectional survey is one that produces a snapshot of a population at a particular point in time, a cross-section of the subjects of varying ages and other socio-demographic factors are sampled and studied at the same time and data are obtained at one time from groups or different stages of development. (Cohen, Manion, & Morrison, 2011).

Area of the Study: The study was conducted in Ogige market in Nsukka local government area of Enugu State. The researcher observed that there was indiscriminate dumping of refuse by the roadside and inside gutters all around the market environment. Thus, the researches deemed the area appropriate for the study.

Population for the Study: The population for the study comprised of all the registered traders in Ogige market Nsukka. The estimated number is about 3,500. (Local Market Authority, 2019).

Sample for the Study: The sample for the study consisted of 350 traders. This is in line with Nwanna's rule of thumb (1999) which states that when the population is in few thousands 10percent of the population can be considered representative. The market consists of blocks of lock-up shops and some attachments (for those who cannot rent a lock-up shop) labelled A to N. Simple random sampling was used to select twenty-five traders from each block to make up the sample for the study.

Instrument for Data Collection: A researcher designed Sanitary Practices Questionnaire (SPQ) was used for data collection. The SPQ consisted of three sections A, B and C. Section A consisted of one item on the respondent's demographic variable of gender, section B consisted of five items on sanitary practices adopted by traders in Ogige market while section C consisted of seven items on factors affecting sanitation practices adopted by traders in Ogige market. The instrument was validated by three experts in the Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. A letter of introduction duly signed by the Head, Department of Human Kinetics and Health Education, University of Nigeria, Nsukka, seeking permission to carry out the study was presented to the chairman Ogige market traders association seeking permission to carry out the study on sanitary practices adopted by traders in Ogige market. A split-half method using the spearman's Brown coefficient was used to correlate the data generated. The reliability index of .81 was obtained and adjudged reliable for embarking on the study. In sections A and B the respondents were required to tick on the option that applied to them while in section C, the respondents were asked to indicate by placing a tick on a dichotomous response option of Yes or No.

Data Collection Technique: Copies of the questionnaire were administered to the 350 respondents out of which 341 were returned, which gave a return rate of 97.4 per cent. The 341 copies of the questionnaire returned were used for data analysis.

Data Analysis Technique: Data generated were analysed using frequency counts, percentages and Chi-square statistic. To classify each item as a factor affecting sanitation practice or not a benchmark of 50% was used. Therefore, responses from 0-49.9percent were not considered a factor while responses from 50-100percent were considered a factor. The research questions were answered using percentages while the null hypothesis was tested using Chi-square statistic at .05 level of significance and appropriate degree of freedom.

Results

Table 1: Percentage Responses on Sanitary Practices Adopted by Traders (n= 341)

S/N	Sanitary practices	f	(%)
1	What do you use to collect refuse in your shop?		
	a) Polythene	65	(19.1)
	b) Basket	123	(36.1)
	c) Carton	33	(9.7)
	d) Bucket with lid	120	(35.2)
2	Where do you dump your refuse?		
	a) Nearby bush farmland	40	(11.7)
	b) ESWAMA bin	271	(79.5)
	c) On the roadside	10	(2.9)
	d) In the gutter/drains	20	(5.9)
3	How often do you dispose of waste collected?		
	a) Daily	114	(33.4)
	b) Every two days	100	(29.3)
	c) Weekly	119	(34.9)
	d) Monthly	8	(2.3)
4	How do you dispose of your sewage?		
	a) Water cistern	404	(59.8)
	b) Pit latrine	63	(18.5)
	c) Bucket latrine	55	(16.1)
	d) Open range/bush method	19	(5.6)
5	What method do you use in disposing of the excreta of your child (if applicable)?		
	a) Polythene	88	(25.8)
	b) Diapers	253	(74.2)

Table 1 showed that slightly more than one-third of the respondents used basket (36.1%) and bucket with lid (35.2%) each for collecting refuse while 9.7percent use carton. The table also showed that majority of the respondents (79.5%) dumped their refuse in the ESWAMA bin while 5.9percent still dumped their refuse in the gutter/drains. Equally, the table showed that one-third of the traders (33.4%) disposed of their waste daily while slightly above one third (34.9%) disposed of their waste weekly. The table further revealed that majority of the respondents (59.8%) made use of the water cistern form of sewage disposal while a few (5.6%) still practiced open range/bush method. Majority of the respondents used diapers (74.2%) in collecting the excreta of their children.

Table 2: Percentage Responses on Factors Affecting Sanitation Practices Adopted by Traders (n=341)

Factors affecting sanitation practices		M	F
		f (%)	f (%)
1	Lack of good toilets	155(45.5)	186(54.5)
2	The distance of good conveniences	110(32.3)	231(67.6)
3	Lack of dump sites	174(51.0)	167(49.0)
4	Lack of clean water	153(44.9)	188(55.1)
5	The bad state of toilets in the market	111(32.6)	230(67.4)
6	Attitude of some traders'	165(48.4)	176(51.6)
7	Others (improper drainage, poor waste management)	6(1.8)	335(98.2)

Results in Table 2 showed that lack of dumpsites (51.0%) was the only perceived factor affecting sanitation practices among traders in Ogige market, Nsukka. Other factors such as lack of good toilets, the distance of good conveniences and others were not adequately reported to be factors.

Table 3: Percentage Responses on Sanitary Practices Adopted by Traders Based on Gender (n = 341)

S/N	Sanitary practices	M(88) f (%)	F(243) f (%)
1	What do you use to collect refuse in your shop?		
	a) Polythene	18(18.4)	47(19.3)
	b) Basket	29(29.6)	94(38.7)
	c) Carton	14(14.3)	19(7.8)
	d) Bucket with lid	37(37.8)	83(34.2)
2	Where do you dump your refuse?		
	a) Nearby bush farmland	11(11.2)	29(11.9)
	b) ESWAMA bin	75(76.5)	196(80.7)
	c) On the roadside	3(3.1)	7(2.9)
	d) In the gutter/drains	9(9.2)	11(4.5)
3	How often do you dispose of waste collected?		
	a) Daily	38(38.8)	76(31.3)
	b) Every two days	23(23.5)	77(31.7)
	c) Weekly	31(31.6)	88(36.2)
	d) Monthly	6(6.1)	2(0.8)
4	How do you dispose of your sewage?		
	a) Water cistern	57(58.2)	147(60.5)
	b) Pit latrine	18(18.4)	45(18.5)
	c) Bucket latrine	21(21.4)	34(14.0)
	d) Open range/bus method	2(2.0)	17(7.0)
5.	What method do you use in disposing of the excreta of your child (if applicable)?		
	a) Polythene	27(27.6)	61(25.1)
	b) Diapers	71(72.4)	182(74.8)

Results in Table 3 showed that more than one-third of males (37.8%) used buckets with lids in collecting their refuse while more than one-third of females (38.7%) used basket. The table also showed that more than half of both males and females (75.5%) and (80.7%) respectively disposed of their refuse in the ESWAMA bin. The table further revealed that slightly above one-third of the females (36.2%) disposed their refuse weekly while slightly below one-third of the males disposed their refuse daily. Findings also showed that more than half of both males and females (58.2%) and (60.5%) respectively disposed of their sewage using the water cistern. Majority of both males and females used diaper in collecting the excreta of their children.

Table 4: Summary of chi-square Analysis of Method of Refuse Collection Adopted by Traders in Ogige Market Based on Gender (n=341)

Variable	N	Polythene	Basket	Carton	Bucket with lid	χ^2 value	df	P-value	Decision
Gender	341	O(E)	O(E)	O(E)	O(E)				
Male	88	18(18.7)	29(35.3)	14(9.5)	37(34.5)	4.910	3	.179	Not
Female	243	47(46.3)	94(87.7)	19(23.5)	83(85.5)				Rejected

Table 4 showed no significant difference in the method of refuse collection based on gender ($\chi^2 = 4.910$, $df = 3$, P value = .179) since the p value is greater than .05 level of significance

Table 5: Summary of chi-square Analysis of Place of Dumping Refuse Adopted by Traders in Ogige Market Based on Gender

Variable	N	Nearby Bush	ESWAMA Bin	Roadside	Drainage/ Gutters	χ^2 value	df	P-value	Decision
Gender		O(E)	O(E)	O(E)	O(E)				
Male	88	11(11.5)	75(77.9)	3(2.9)	9(5.7)	2.770	3	.429	Not Rejected
Female	243	29(28.5)	196(193.1)	7(7.1)	11(14.3)				

Table 5 showed that there is no significant difference in the place of dumping refuse ($\chi^2 = 2.770$, $df = 3$ P-value = .429) according to gender since the P-value is greater than .05 level of significance.

Discussion

The key informant interview with the market chairman revealed that all the traders in the market carry out general cleaning of the market and its environs three times yearly. The key informant interviewee further revealed that there is a functional sanitation unit made up of twelve persons who are responsible for supervising the cleanliness of the market environment. The chairman, however, lamented that presently the borehole which is supposed to supply water to the traders is not functional. There are four existing toilet facilities in the market, two are owned by the traders one is owned by a private individual and the other by the government. The chairman also stated that the two refuse dumps around the market environment are evacuated daily.

Result in Table 1 showed that majority of the respondents used baskets to collect refuse in their shops. The finding was not expected thus surprising because one expects that the traders should have known that using a bucket with lid was more hygienic than using an ordinary basket to collect refuse. This could probably be due to the nonchalant attitude of some of the traders and the fact that some people feel that anything can be used to collect refuse since refuse is not of any value. The refuse in the basket is exposed to flies which after perching on the refuse will consequently perch on food transferring disease-causing organisms on the food. The result was also in line with the findings of Dararamola, Olowoporoku, and Odunsi (2017) who stated that 20.8% of their respondents used ordinary baskets to collect refuse. This should be discouraged as an unhealthy attitude. The table also showed that majority of the respondents dumped their refuse in the ESWAMA bin (Enugu-State Waste Management Authority Bin). This was surprising because one began to wonder where all the mountain of refuse around the market came from and even on the major road that passes through the market. Traders are aware of the negative consequences of indiscriminate dumping of refuse. The result, however, contradicted the study carried out by (Abejegah et al. 2013) which found out that despite the high level of awareness of the respondents concerning waste management 60% of the respondents practiced open dumping. Similarly, Dararamola, Olowoporoku, and Odunsi (2017) reported that in modern markets only 4.5% of their respondents disposed of their refuse in the designated dumpsites while in traditional markets, a majority (50.0%) used the designated dumpsites. The high rate of indiscriminate dumping could be as a result of the distance of dumpsites from the market and this invariably constitutes nuisance around the market environment. Absence of litter bins in strategic positions within the market could also be responsible for the indiscriminate dumping of refuse. Litter bins should be provided at different positions in the market. The findings also showed that majority of the respondents disposed of their refuse weekly, this is surprising because one should expect that traders should be able to dispose of their wastes daily. This was in line with the study carried out by Abejegah et al. (2013) who stated that despite the volume of waste produced by respondents wastes are disposed of weekly. The study, however, was in contrast with the study conducted by Safo-Audu (2019) where a significant number of respondents (77.2%) disposed of their solid wastes daily while few respondents disposed of their solid wastes weekly. These wastes that are left for many days before being disposed of are sources of unpleasant odour and infection in the market environment. This should be discouraged through health education, and the sanitation unit should enforce daily disposal of refuse.

The study also established the fact that majority of the respondents (59.8%) used the water cistern form of sewage disposal. This was expected, thus not surprising and was equally commended because human excreta always contain a large number of germs which if not properly disposed of, infect people with diseases such as cholera, typhoid but when the excreta has properly disposed of the incidence of such disease will be highly reduced. It is however surprising to note that about (5.6%) of traders still practice open range defecation or bush method. This is surprising because of the high level of public health awareness campaign against open defecation. One other reason which could be considered is the trader- toilet ratio (3500: 4). The number of toilets serving the traders was quite insufficient and this might be responsible for having people who still practice bush method or open range defecation. More toilets should be built in the market to service the teeming number of traders and buyers who

sometimes get pressed while in the market. This finding agreed with the findings of (Buowari, 2013) who stated that about 40% of Nigerians do not have access to any form of toilet facilities, their toilet is the bush or forest area. The study established the fact that majority of the respondents (74.2%) disposed of their child's excreta using diapers. The finding was expected thus not surprising because most mothers now make use of diapers because they are affordable and the knowledge of the fact that safe stool disposal particularly of a child is important because child faeces can contaminate the environment and is important in reducing the risk of diarrhoea. Brain and Luyendijk (2015) stated that the safest way to dispose of a child's faeces is to help the child use the toilet and for very young children, to put or rinse their faeces into a toilet. For some very small babies diapers must be used but these diapers are sometimes dumped carelessly into the environment leading to public health risks.

Table 3 revealed the fact that majority of the respondents (51.0%) saw a lack of dumpsites in the market as a factor affecting sanitation practices of traders. This finding was expected thus not surprising. The availability of dumpsites will not give room for indiscriminate dumping of refuse such as in the gutter, drains or by the roadside as is evident in Ogige market. The findings also conformed to the findings of Abejegah et al. (2013) who reported that improper waste management in market places is probably due to some reasons which include lack of facilities for waste collection.

Findings equally showed that there was no significant difference in the method of refuse collection and in the place of dumping refuse based on gender. This implies that females and males did not differ in the method of refuse collection and in the place they dump their refuse. This result was not expected thus surprising because one would have expected that women should do better than men in the method of collecting and dumping of refuse. This is because in most societies women are by nature more concerned with the role of keeping the environment clean through sweeping, collecting and disposing of refuse collected. It is a role they have been playing in their various households which should extend to the market. The result was in contrast with the findings of Sadiq et al. (2018) who reported that women were more saddled with the responsibility of handling environmental sanitation with greater sensitivity than men.

Conclusion

Based on the findings and discussions, it can be concluded that majority of the traders used ordinary baskets instead of buckets with lids to collect refuse. A good number of traders believed that lack of dumpsites affected sanitation practices among them. Many of the traders disposed of their wastes weekly into the ESWAMA bin. Many of the traders used water cistern form of toilet while open defecation was still practiced by some traders.

Recommendations

Based on the findings, the following recommendations were made:

1. There is need for the sanitation unit to have supervisors who should be in charge of the various block of shops who will ensure that every trader has a bucket with lid for refuse collection.
2. The local market authority should provide litter bins at end of every block of shop so that traders can empty their refuse before they are finally emptied at the dumpsite. This will reduce indiscriminate dumping of refuse in gutters or drains.
3. Dumpsites should be provided close to the market to avoid indiscriminate dumping of refuse. The local government authorities should also ensure that the dumpsites are cleared daily to avoid unpleasant odour and reduce the spread of infections.
4. There is need for building more toilets at different positions in the market to serve the traders and buyers, this will ensure that open defecation is completely eradicated.
5. Periodic health awareness should be organized on the need for good sanitary practices among traders.

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