A Sociological Investigation to Periodic Street Markets and Environmental Pollution in Yenagoa City, Bayelsa State Nigeria

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Abstract: The human harmful impact on the environment has been made to focus on the release of chemical substances to the environment from industries with little or no recognition to the procedures of resources distribution via market situations. The study seeks to examine sociological factors associated with periodic street markets as predictive of environmental pollution in Yenagoa. The study was anchored on Weberian Social Action Theory. A survey research design was adopted to sample 372 sellers in a simple random technique in seven market locations. Structured questionnaire was utilized to collect quantitative data from the respondents. Descriptive statistics and multiple linear regressions were used to analyze data using SPSS version 20.0. The hypotheses were tested at p-value<0.05 level of significance. Findings revealed that the mean age of the respondents was 34.4±9.21, while majority of the respondents (51.3% food stuff and 11.3% fruit items) in the markets sell food related items. Findings also showed that among other predictive factors of environmental pollution, the medium of waste disposal (99.4%) was the most significant factor predicting the occurrence of environmental pollution in the city. In view of the findings, it was concluded that effort to exert compliance to environmental sanitation especially among sellers in the periodic street markets in the city should be made by the government in collaboration with the market association in order that indiscriminate dumping of refuse around market areas can be brought to control.

Keywords: Periodic Street Markets, Environmental Pollution, Social Action, Health Problem, Yenagoa

1. Introduction

1.1. Problem Statement

All over the world, people are worried about the harmful impact of human activities on the environment. Indeed, public concern about the natural world has led to the promulgation of environmental laws as orchestrated by the United Nations Millennium Development Goals in year 2000 (MDG 7: Ensure environmental sustainability) nationally and internationally by the successive governments across the globe, which was further strengthened by goal 6 of the Sustainable Development Goals (SDG 6) of the United Nations in 2015 which stated thus: [to ensure availability and sustainable management of water and sanitation for all; with

its targets that:

By 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations; and by 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and increasing recycling and safe reuse by X% globally (cited from [1].

This shows that besides the national concerns of the government on environmental related issues, global authorities are also interested in curbing environmental hazards that could be detrimental to human health.

In view of this, much of environmental debate have hinged

on the nexus between the environment and consumption patterns including preventing the devastating effects of human activities against themselves through agricultural practices [2]; sustainable development and renewable resources especially for the purpose of safeguarding the resources against future use and to prevent resource scarcity [3]; [4]; preventing oil exploration and bunkering activities [5] among others, there is a dearth of empirical analysis to describe the environmental problems resulting from these activities.

As scholars on environmental issues will always describe the term "environment"; it is the sum total of conditions that surrounds human beings at a given point of time and space [6], which implies that the environment is all-encompassing. Putting it differently, the environment does not exist in isolation because it consists of the interacting systems of both the physical, biological, economic and cultural elements which are also interlinked with people in the society individually and collectively for the maintenance of equilibrium in the ecosystem. Mondal laying more emphasis on the interlinks between the environment and the humans, noted that the environment is the total conditions in which people (humans) have to survive or maintain its life process because it is has the capacity to influence their growth and development socially, economically and physically.

However, to a large extent, man as part of the environment in one way or the other alters the ecosystem deliberately or unintentionally with its activities. The consequences are that both the physical, social and economic environment is damaged due to the growing resource consumption usually orchestrated by the humans themselves especially the rich, which has the heaviest impact on the poor populace [2]. As Taiwo and Ajayi [7] argue, "whatever the source of damages to the environment, man bears the primary consequences which are evident in the daily damages and deterioration of the environment as well as the overall threats to his general well-being".

Giddens [2] commenting on the sources of damage to the environment as induced by man activities, noted that among all other sources, the wealthy people are, most often than not, the major source of the damage due to the fact that they are more at advantage to utilize their resources to explore the natural resources thereby enabling them to enjoy "the many benefits of consumption without having to deal with its negative effects" [2]. This is to say for example, at any given point in time, the rich groups have the capability to move from any problematic arena to an area that is less contaminated at the expense of the poor populace. As a way of illustration, to site things like industrial estates, build major roads, construct railway lines, airports, markets and many more, the locations of all these are most often than not, sited close to the low-income areas at the local level. From the global point of view, environmental hazards are most common among developing nations because they serve as the major supplier of raw materials for the developed worlds. The devastating consequences of these activities on the less developed world are shortage of water supply, environmental

degradation, and environmental pollution. This means that poverty intensifies environmental threats [2].

Similarly, people with few resources have little choice but to maximize the resources at their disposal. As a result of this, more pressures are put to little resource base as the population increases especially at the urban centres. Thus, scholars have identified different sources of environmental threats confronting the contemporary world which have been broadly categorized as pollution and waste products that are released into the environment or in form of the depletion of renewable resources (see [2]; [4], [3]); yet the sociological undertone central to humans as the cause and the receiving end of some of these activities within the environment have not been explored adequately in relation to distribution of goods and services.

It is thus interesting however that there are many sources of environmental threats globally which are systematically hinged on consumption patterns of resources (see [2]); but little attention has been made by researchers to exert their efforts of scholarships on the intertwine nature of human activities in respect to distribution of such resources vis-à-vis market locations to the final consumers, as well as the likely environmental threats that could result from these activities when it is primarily concerned with periodic street markets in an urban settings. Specifically, this study aims at examining sociological factors associated with periodic street markets as predictive of environmental pollution in the city of Yenagoa.

1.2. Brief Literature Review and Theoretical Framework

Two definitional issues emerged in this study, namely; environmental pollution and periodic market. Environmental pollution can be defined as the release of chemical substances into the atmosphere, soil, water, etc. thereby contaminating the atmosphere, soil and the water whichever area of the environment to which such a substance is released through human activities [8]. To Tinkler [9], periodic market is defined as a set of markets that is held only on certain days of the week and also fixed in advance. This is mostly found in the rural markets. It has also attracted much comment and documentation overtime as a unique feature in the literature. Existing literature shows that West African market periodicities varying from two to eight days or the four day system which is not a common phenomenon in urban markets that are held on daily basis.

Furthermore, the preponderance of periodic street markets is on the increase as a consequence of urbanization in Nigeria. Existing literature have established the fact that besides the positive effects of urban markets in terms of leading to effective distribution of resources to the final consumers as well as facilitating economic development [10]; there are negative effects accrue to it [12]. For example, Taiwo and Ajayi [7] in their study on "*Environmental pollution in urban markets: The case of Bodija Market Ibadan, Nigeria*" observe that over 60 percent of the market sellers disposed their wastes into waste containers, 18 percent of the respondents disposed it anywhere on the ground around market premises, while 15

percent disposed their wastes into refuse dumpsite.

To Taiwo and Ajayi [7], although sellers in the market are willing to minimize environmental pollution in the market as majority of them use waste containers, yet it was observed that refuse are not properly disposed in the market area, and again, people are still seen to be dumping their refuse along the road side of the markets or around the heaped dung-hill within the market premises which places the health of the sellers and buyers in danger. This means that the attitudes of people in urban markets towards waste disposal and management is not only inimical to their health but the environment to which the markets are situated.

In terms of the attitudes of the sellers in urban markets towards environmental sanitation, Ibrahim [12] argues that the major 'driving force' for poor environmental conditions experienced in urban market is attitudinal because any effort exerted to bring about momentous attitudinal change and awareness creation on environmental sanitation in the market is always thwarted. As Ibrahim [12] revealed in his study on weekly environmental sanitation in Bodija market Ibadan, "the attitude of people towards environmental sanitation and cleanliness is so bad that voluntary compliance cannot be relied on in ensuring good sanitation behavior in the market". Besides environmental pollution and poor attitudes towards environmental pollution in urban markets, traffic congestion and markets turning to nuisance and hideouts for criminals have been a common phenomenon. Many scholars have studied the nexus between urban markets and environmental pollution including poor attitudes of sellers towards environmental sanitation in market premises which could lead to serious environmental threats ([7]; [12]).

Theoretically, Weberian social action sees to the actions and reactions of agents (individual sellers) in such a way that an action is termed 'social' if the actor takes into consideration the behaviour of others and is thereby oriented in its course. Thus, the basic premise of social action is to explain human behaviour in a non-positivist form in order that human behaviors can be related to cause and effect in the social realm. The theory of social action accepts and assumes that humans vary in their actions based on the existing social contexts and how it will affect other people in such a manner that when a potential reaction is not desirable, the action is modified accordingly. Action can also mean either a basic action (i.e the one that has a meaning) or an advanced social action, which does not only have a meaning but directed to other actors in order to causes an action or perhaps *inaction* [13].

According to Weber [13], Sociology interprets and explains the meaning of social action in a cause and effect situations as well as the action it produces. By 'action', it means the extent to which the agent or agents see his behaviour as subjectively meaningful... which can also be referred to as: (i) the meaning intended by the actor on a particular historical occasion or by a number of actors on an average set of cases; (ii) the meaning attributed to the actor in a pure constructed abstract. Thus, the 'meaning' could be thought as somehow objectively 'correct' or 'true' by some

metaphysical criterion [13].

To Weber (1864-1920), there are four types of social action, namely; traditional action, emotional action, value rational *(Wertrational),* and instrumental rational action *(Zweckrational)*. While traditional action and emotional action are considered to be characterized by absence of subjective judgment and meaning of the actor, value rational action (*Wertrational*) and instrumental action areexemplified rational orientation to the extent that a subjective judgment and the implied meaning given to it by the actor. This means that an action lies in the specific value consideration. In other words, the actor in question has a specific goal to achieve for his/her action(i.e profit maximization as the case may be in periodic street market) without giving consideration to those things that could result to environmental pollution.

As Enaikele [14] argues, though Weber was one of the first social theorists who made the subjective inner state of actor the subject matter of analysis of social action, but Talcott Parsons (1902-1979) is another theorist whose writing centres on the nature of social action. Parsons has however produced a general theoretical system for the analysis of society, which he called action theory. To him, action theory can be described as an attempt to maintain the rigour of objectivism, while acknowledging the necessity of the subjective dimension of human action. He has also made an impressionistic position that actions are to be explained by the subjective intended meaning given to it by the actor or by his/her perception and definition of the situation [14], such as the economic situation of the people in the market as well as the structure of the society.

For Weber however, the decision to act in a certain way is the product of the actor's value and interpretive judgment [13], but for Parsons, there is considerable attention to social norms, values and the definition of situation in the determination of action. Meaning that norms and values are standards, which individuals internalize over time, and they are recalled by the inner state of the actor in contrast to the external stimuli. The inner state of the actor is what Parsons referred to as emotion and judgment. And by this, individual actors have emotions and make judgment to act based on subjective meaning, perception and the definition of the situation. This means that Parsons has attached so much importance to the definition of situation in the determination of action.

Henslin [15] added to this, by saying that the "definition and meaning of actions are constructed in an interacting situations by a process of negotiation among actors. Therefore, collective actions do not depend on the objective situation; rather, on subjective interpretation, which sociologists call the definition of reality" [15]. By a way of applying social action theory to the subject of our investigation; the actions of the sellers in the periodic street market is not made directly to the action of one another but based on the meaning which the sellers attached to their actions in respect to *wertrational*and *zweckrational.* That is to say, in the process of social interaction, sellers communicate meaning to others involved in the market only

in terms of profit maximization; rather than keeping both profit and clean environment. This also means that "meanings are not fixed; they are created, developed, modified and changed within the process of interactions" [16] which could also be changed to conform with keeping environment that is free from pollution.

To understand periodic market sellers' actions however, there is a need to adopt Weber's classification of understanding, namely; *acktuellesverstehen* which means observational understanding of the social phenomenon under investigation, as well as *erklarendesverstehen* (or explanatory). By *erklarendes* (explanatory) understanding, Weber argued that the need to understand the motives that give rise to individual's action which also involves attempting to discover connections between events and causal relationships should be investigated [17]. Hence, sellers' dispositions in the periodic street market towards environmental pollution must be connected to their motives and intentions which need to be investigated and understood.

As shown in figure 1, the conceptual framework of the study is based on social actions of the sellers and buyers with its effects on the location of periodic street markets. The social actions of the sellers to a large extent predispose them to certain actions premised on the variants of value-rational and instrumental action due to their quest for profit maximization and the Machiavellian theorem - *the end justifies the means* - meaning that whatever actions undertaking regardless of the environment, profit maximization is the ultimate goal. Putting it differently, for as much the sellers in the market are still able to offer their goods for sales, the condition of the environment becomes secondary. The same actions taking by the sellers, the government and its agency can as well take their own actions in order that they regulate the activities of the sellers without necessarily jeopardizing their livelihood sources. Thus, there is strong connection between periodic street markets, the sellers' actions and the environment as indicated in the diagram.
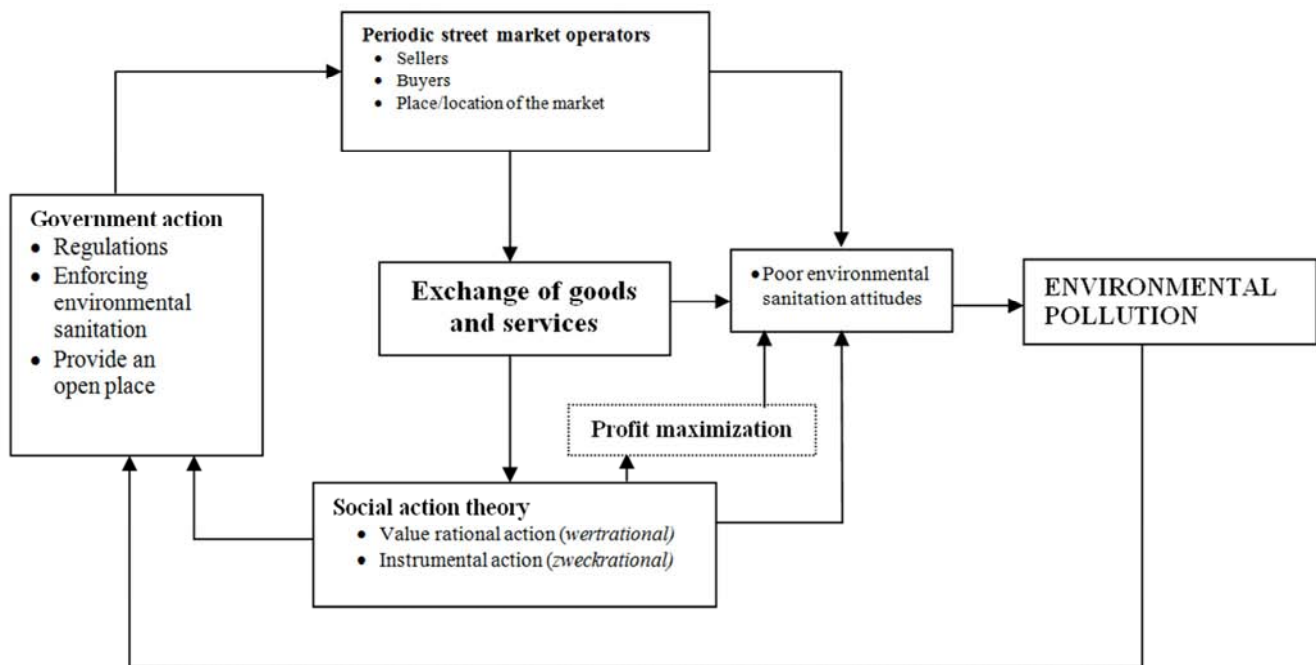
Source: Authors' Idea (2016)

Figure 1. The Conceptual Framework.

2. Methodology

2.1. Data and Methods

In a survey of three hundred and seventy two sellers (n=372) selected from seven periodic markets (Akenfa Monday Market; Etegwe Tuesday Market; Okaka Tuesday Market; Agudama Wednesday Market; Igbogene Thursday Market; Opolo Friday Market and Kpansia Saturday Market) in Yenagoa City, Nigeria between April and May 2016; quantitative data were collected to identify predictive factors of environmental pollution. Although the population of Yenagoa according to the Nigeria Population Commission

2006 Census report shows that the population of Yenagoais put at 352, 285 (cf NBS, 2012), but no accurate record showing the number of sellers at the periodic street markets in the city. Due to the fact that there were no accurate records for the traders (sellers) in the periodic street markets in the city, the Conchran's (1977) sample size determination formula was used to calculate and arrive at the sample size used for the study.

However, a structured questionnaire was used as instrument of data collection using simple random sampling technique, which was based on each of the market days identified in the city. The structured questionnaire was structured to capture the demographic profile of the

respondents, environmental pollution, and the types of goods sales, time of sales closed, medium of waste disposal, dump site for waste as well as fee paid for waste disposal as predictive factors of environmental pollution. Notably, all ethical considerations were observed in the manner that the thrust of research's subject were not jeopardized through informed consents, assurance of anonymity, and confidentiality in the course of questionnaire administrations.

2.2. Data Analysis Strategy

Data were imputed and analyzed with the aid of Statistical Package for Social Sciences (SPSS version 20.0) using descriptive and multiple linear regression at p<0.05 level of significance. While descriptive statistics were used to analyze demographic profile of the respondents, multiple linear regressions was used to predict environmental pollution (0, 1) as an outcome of the predictors - types of goods sales, time of sales closed, medium of waste disposal, dump site for waste, and fee paid for waste disposal. The equation is shown below:

$$\mu_y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 \qquad (1)$$

Where μ_y = change in environmental pollution, β= Beta (indicating the standardized coefficients for each variable)

X_1 = Types of goods sales
X_2 = Time of sales closed
X_3 = Medium of waste disposal
X_4 = Dump site for waste
X_5 = Fee paid for waste disposal

3. Results

Socio-Demographic Characteristics of Respondents

Table1 shows the socio-demographic profile of the respondents. As the table reveals, 30.9 %of the respondents were male, while a larger proportion (69.1%) of them were females. This means that there were more female sellers in the periodic street markets in the city when compared their male counterparts. In terms of the ethnic groups of the respondents in the periodic street markets, greater percentage (43.0%) of the sellers were from Igbo ethnic group, followed by Ishoko/Ishekiri ethnic group (18.5%), and Ijaw 12.1%, Yoruba 9.9%, while Ogbia remained the lowest percentage (1.3%) of sellers in the periodic markets. This implies that Igbo people who had been known for their business-oriented occupation were still involved to a greater extent in the practice of periodic street markets in the study area compared to Ijaw ethnic group who are the indigenes of the study area.

Furthermore, in order to ascertain the actual residential area of the respondents; respondents were asked whether they reside within the city or outside the city where the periodic street markets are carried out. The table reveals that more than half percentage of the respondents (98.7%) resides within the city compared to only a few of them (1.3%) that came to do business in the city only for the

market days. On the age of the respondents, the mean age is 34.4 years old while the specific age of the respondents were grouped into 20-24 (13.2%); 25-29 (24.2%); 30-34 (9.9%); 35-39 (18.8%); and 40+ (33.9%) respectively. With the specific age group of the respondents and the mean age, it implies that majority of the respondents were adults as showcased by larger percentage (33.9%) of the respondents being 40 years and above, followed by the age group 25-29 (24.5%).

Table 1. *Distribution of respondents by socio-demographic characteristics.*

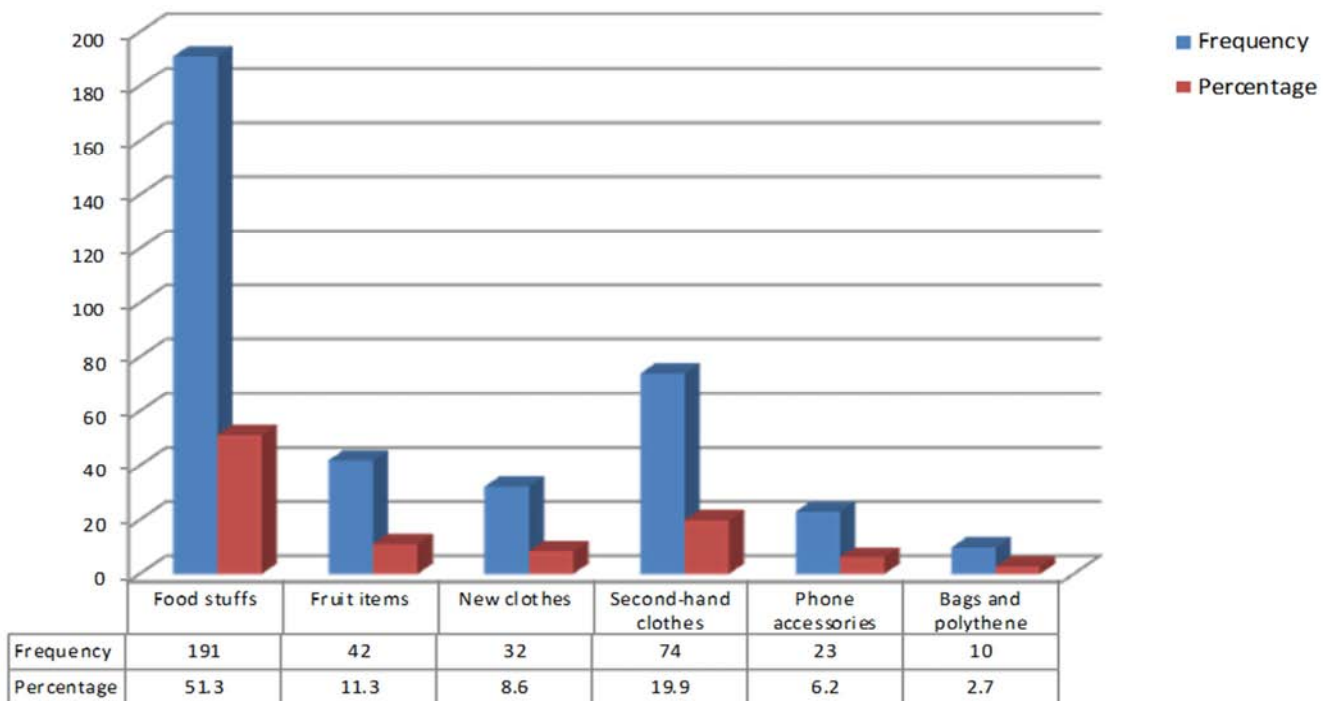| Variables	Frequency (N=372)	Percentage (%)
Gender		
Male	115	30.9
Female	257	69.1
Ethnic Group		
Ijaw	45	12.1
Epie/Atissa	31	8.3
Ogbia	5	1.3
Ishoko/Itsekiri	69	18.5
Igbo	160	43.0
Yoruba	37	9.9
Hausa	13	3.5
Others (specify)	12	3.2
Actual residential area		
Within the city	367	98.7
Outside the city	5	1.3
Age (Mean Age=34.4 years)		
20-24	49	13.2
25-29	90	24.2
30-34	37	9.9
35-39	70	18.8
40 +	126	33.9
MaritalStatus		
Never married	131	35.8
Ever married	219	59.8
Widowed/widower	11	3.0
Divorced/separated	5	1.4
Missing	6	-
Highest Level of Education		
No schooling	13	3.5
Primary	24	6.5
Secondary	180	48.8
NCE/ND	103	27.9
B.Sc/HND/B.Tech/Eng	38	10.3
Others	11	3.0
Missing	3	-
Average Income Per Market Day		
<N5,000	217	58.3
N5,000-N9999	53	14.2
N10,000-N14,999	33	8.9
N15,000-N19,999	38	10.2
N20,000 and above	31	8.3

Source: Field Work (2016)

On the marital status of the respondents, it is revealed on the table that more than half percentage of the respondents (59.8%) were ever married compared to other categories of respondents who were single (35.8%), widowed (3.0%),

divorced/separated (1.4%) respectively. Furthermore, as revealed on the table by highest level of education of the respondents, a larger percentage of the respondents (48.8%) attended secondary school education, 27.9% had National diploma, 10.3% had B.Sc/HND/B.Tech/Eng. This implies that in aggregate, majority of them attended formal education when compared to those who indicated "no schooling" (3.5%). On the average income earned per market day, the table indicates that more than half of the respondents (58.3%) earned less than N5000 per market day when compared to few of them who earned N20,000 and above per market day. This suggests that although periodic street markets have become a common phenomenon in the study area but it has not yielded high level of income to the operators when considering the majority of the respondents that earned less than N5000 per market day.

Patterns of Periodic Street Markets

Figure 2 shows the distribution of respondents by the types of goods offer for sales in the periodic street markets, 51.3% of the respondents indicated that they offered food stuffs for sale in the market, 11.3% of the respondents signified fruit items, 8.6% of them indicated that they offered new clothes for sale, 19.9% said second-hand clothes, 6.2% of the respondents stated phone accessories, while 2.7% of the respondents said bags and polythene. To simply put, it means a large majority of the respondents (51.3% and 11.3%) in the periodic street markets were food related items sellers when compared to non-food items related sellers.

	Food stuffs	Fruit items	New clothes	Second-hand clothes	Phone accessories	Bags and polythene
Frequency	191	42	32	74	23	10
Percentage	51.3	11.3	8.6	19.9	6.2	2.7

Source: Field Work (2016)

Figure 2. Distribution of respondents by the types of goods sales in the market.

In addition to this, table 2 reveals the distribution of respondents by the patterns of periodic street markets operation such as the materials to which sellers used to protect thegoods they offered for sales from sun rays and rain since the market operations are usually carried out in the open. It was revealed that a large majority of the respondents (72.3%) used large umbrella to shield their goods, 18.0% said they used polythene, while 9.7% signified that they used bags and cartons to protect their goods from the rain and sun rays.

Furthermore, in order to ascertain the time to which periodic sales activities commenced in the periodic street markets, respondents were asked the range of time they start their sales activities on each of the market days. It was indicated that 93.8% of the respondents signified between 6:00am-7:00am, while 6.2% of the respondents said between 7:01am-8:00am. This suggests that the larger percentage of the sellers in the periodic street markets commenced their sales activities earlier when compared to other categories of the respondents.

Table 2. Distribution of respondents by patterns of periodic street markets operations.

Variables	Frequency (N=372)	Percentage (%)
Material for goods protection		
Polythene	67	18.0
Large umbrella	269	72.3
Bags or cartons	36	9.7
Other alternatives	-	-

Variables	Frequency (N=372)	Percentage (%)
The time periodic street market commences		
6:00am-7:00am	349	93.8
7:01am-8:00am	23	6.2
8:01am-9:00am	-	-
9:01am-10:00am	-	-
The time of closing per market day		
2:00pm-7:00pm	10	2.7
3:00pm-8:00pm	61	16.4
4:00pm-9:00pm	201	54.0
No specific time	100	26.9

Source: Field Work (2016)

Moreover, as part of the measure to ascertain the patterns of periodic street markets operation in the study area, the time of closing for the sales activities was also ascertained. As the table revealed, a large proportion (54.0%) of the respondents signified that they closed their sales activities in the market between 4:00pm-9:00pm, followed by 26.9% of them who indicated that they had no specific time for closing, while only few (2.7%) of them closed between 2:00pm-7:00pm. This implies that most of the operators of the markets close late from the markets.

Sociological Factors Associated with Environmental Pollution

A multiple linear regression was run to predict environmental pollution (dependent variable) from patterns of periodic street markets operation (the types of goods sales in the markets, time of sales closed, medium of waste disposal, dump site for waste, and fee paid for waste disposal) with the hypothesis stated below:

H_{Ro}: *There is no relationship between patterns of periodic street market and environmental pollution.*

Table 3 reveals that the variables significantly predicted environmental pollution. This is because the adjusted R^2 of the model is 0.984 with the $R^2 = 0.984$ which implies that the multiple linear regression explain 98.4% of the variance in the data presented. The F ratio, $F (5, 338) = 4290.16$, $P<0.005$ in the ANOVA test. Meaning that the overall regression model is a good fit for the data presented in the table. As such, the null hypothesis postulated can be rejected.

Table 3. *Estimated Model Coefficients for Environmental Pollution (N=372).*

Model (Predictor)	Std. Error	Coefficients β	T	Sig.	Remarks
(Constant)	.030		10.892	.000	Significant
Types of goods sales	.003	.006	.802	.423	Not significant
Time of sales close	.009	.034	2.934	.004	Significant
Medium of waste disposal	.006	.994	79.944	.000	Significant
Dump site for waste	.005	.047	5.129	.000	Significant
Fee paid for waste disposal	.008	-.008	-1.179	.239	Not Significant

Dependent variable: Environmental Pollution R^2 = 98.4%; Adjusted R^2 = 98.4% *Significant level $P \leq 0.05$

In respect to this, the standardized coefficients in table 3 indicate how much the dependent variable (environmental pollution) varies with independent variable(s) when all other independent variables are held constant. Although the independent variables statistically correlated with the dependent variable, but among the standardized coefficients, B_4 (medium of waste disposal) with a beta equal to 0.994 (p=0.000) is the most significant. This means that among other independent variables, the medium of waste disposal contributed 99.4% to environmental pollution in the periodic street market when compared to other independent variables.

4. Discussion of Findings

The focus of the study was to examine sociological factors associated with environmental pollution among sellers through the patterns of periodic street markets operation in the City of Yenagoa. Among other predictive factors, the medium of waste disposal was found to be more significant in the study (0.99). This finding corroborates [7], who found that though sellers in the market are willing to minimize environmental pollution as majority of them use waste containers, yet refuse generated in the market are not properly disposed in the market area because people are still seen dumping their refuse along the road side of the markets or around the heaped dung-hill within the market premises which places the health of the sellers and buyers in danger.

This suggests that sellers in the periodic markets in the city of Yenagoa have poor attitudes towards environmental sanitation. Thus, found in tandem with Ibrahim [12], who observed that the attitudes of people in urban markets towards waste disposal and management is not only inimical to their health but the environment to which the markets are situated. And to him, the major 'driving force' for poor environmental conditions experienced in urban market is attitudinal because any effort exerted to bring about momentous attitudinal change and awareness creation on environmental sanitation in the market is always thwarted. This shows to a large extent that the social action of sellers towards profit maximization at the detriment of the environment was more prioritized than the conditions of the environment.

5. Conclusion

Having investigated the phenomenon of periodic street markets among the study population, it is very evident that besides the economic benefits that can be accrued to actors in the periodic street markets, there are social actions that could pose serious threats to the environment ranging from the attitudes of the sellers towards waste disposal in the market places and the time used to sell in the markets. Against all odds, one thing that is yet to be known to all actors in the periodic markets is the health implications of their activities not only to themselves but to their immediate environment in form of environmental pollution. In view of this, everything in periodic markets is attitudinal in nature and sociological in its perspective. As such, the right attitudes of sellers towards cleanliness and environmental sanitation should be encouraged across all periodic street markets in the City.

Recommendations

In the view of the findings of the study, the following are suggested as policy instruments for the government and relevant agencies as policy frameworks:

i. Periodic street market operators should be sensitized on the need to maintain high level of personal hygiene particularly at the market places in order that environmental pollution around market areas can be minimized by the government and relevant agencies.

ii. Formidable association of periodic street market operators that will aid the government and its agencies on environmental sanitation around periodic street markets and other related issues over the operations of the markets should be established.

iii. Effort to exert compliance of environmental sanitation by the association of periodic market operators that would be established in collaboration with the government and its agency on the environment should be advocated in the city.

iv. Dumping of refuse in the market should be consulted to authorized agency by all sellers in the periodic street markets with a controlled fee for waste disposal in order that indiscriminate disposal of wastes could be minimized at the market areas.

v. Since the opening of new market sites may result to huge capital expenditure by the government in the city, periodic street market operators should be made to pay small amount of taxes to the government in order that the cost of running and management of the market environment can be effectively done at the lowest cost by the government.

Acknowledgements

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