



An Evaluation of the Level of Household's Participation in Environmental Sanitation in Ado Ekiti

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJARR/2021/v15i530397

Editor(s):

(1) Dr. Fagbadebo Omololu Michael, Durban University of Technology, South Africa.

Reviewers:

(1) Abebaw Andarge Gedefaw, Debre Markos University, Ethiopia.

(2) Yusriani Sapta Dewi, Satya Negara Indonesia University, Indonesia.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/72561>

Original Research Article

Received 10 June 2021
Accepted 14 August 2021
Published 27 August 2021

ABSTRACT

The paper assessed the level of household's participation in environmental sanitation in Ado Ekiti. A total of 320 copies of questionnaire were administered altogether. The copies of questionnaire were administered to the household heads in each houses selected in each wards. Data analysis was done with descriptive analysis method with the use of frequency table and percentage table. Findings further revealed that there is low turn up for environmental sanitation in the study area; it also indicated that there is moderate or average level of household members' participation in environmental sanitation in the study area. In the same manner, findings further revealed that there are several cases of health problems and challenges related to poor involvement of the people in environmental sanitation most especially at the household level. In the same manner, there is a day set aside for environmental sanitation in the study area, however, despite this, there is low level of efficiency of environmental sanitation as supported by majority of the respondents. It is recommended that improvement of the standards of environmental sanitation should not be taken with levity hands by all tiers of government, as they should develop policies that would be geared towards improving people's participation in household environmental sanitation in the study area and other parts of the country. Furthermore, environmental sanitation should not be only seen

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based on the periodic promulgation as stipulated by the law but should be seen by all citizens as a civic responsibility that needs to be done by all, there should also be the development of programmes geared towards the promotion of people's behavioural change that would enhance the promotion of people's participation in household based environmental sanitation.

Keywords: Environment; environmental sanitation; household; household's participation.

1. INTRODUCTION

The concept of sanitation has been defined in a variety of ways. Mensah [1] defines sanitation as the state of cleanliness of a location, community, or individuals, particularly in relation to those aspects of human health, including the quality of life, which are determined by physical, biological, social, and psychological factors in the environment. By providing a clean environment and taking steps to break the disease cycle, sanitation, according to Schertenleib [2], is an intervention that reduces the risk of people becoming infected. Hygiene services include handling human and animal excreta, disposing of garbage and treating sewage as well as preventing the spread of disease vectors and providing personal and household washing facilities.

The concept of environmental sanitation is a tropical issue that has drawn the attention of many scholars with different views on how communities can maintain proper sanitation. Increase in population, urbanization, industrialization, alteration in the pattern of consumption, economic development has led to a sporadic increase in the generation of waste in the developing nations which has brought about the need for environmental sanitation. According to Omotoso and Oyeniya [3] environmental sanitation is seen as the process of maintaining and ensuring the cleanliness and aesthetic value of our immediate environment in order to enhance the achievement of an environment that is aesthetically pleasing. Omotoso [3] further defined health as the condition of mind or body. The World Health Organisation (WHO) indicated that health can be referred to as the state of complete mental, physical and social wellbeing and not just an absence of infirmity or diseases.

WHO further emphasized that sound mind in a sound body with all things being equal leads to a general modern approach of the practice in which health connotes not only the physical terms, but social terms as well as psychological terms. Thus, health can be referred to as a state of well-being as a result of impacts of physical environment as well as sanitation on man.

However, good health is a major determinant of the development of a community. According to Minkler [4] public health is a major concern to everybody, which is highly related to sanitation. According to Minkler [4] it can be seen as an art and science of enhancing the prevention of diseases, enhancing a prolonged life, enhancing mental and physical health as well as efficiency through communal efforts which is organized through environmental sanitation. These acts enhance the control of the spread of diseases and community infection which often determines the standard of living of all individual in a given community, hence, adequate health maintenance is a means to wealth accumulation.

Household and community participation was brought out as a result of the need to enhance the placement of members of the community at the centre of planning in activities that relates to environmental sanitation. Minkler [4] referred to household's participation as a process that is brought out as a result of social interaction in a collective manner; which is embedded in a given household and aim at achieving a given task which often lead to the betterment of a community. In the study of Eawag [5] household is defined as a residential suburb which consists of people living in the same dwelling as well as shares the same meal. He further indicated that household's participation is the involvement of members of a given household in a given joint activity.

1.1 Statement of the Research Problem

According to Mmom [6] in many cities in Nigeria, there is conspicuous deplorable condition of participation of households in environmental sanitation; in fact, the problems related to environmental sanitation are central problems among all the problems confronting major Nigerian cities. However, urban waste is seen as the major and the most serious environmental problems which are more pressing in urban centres.

In Ado Ekiti, wastes are getting rid of just out of sight, and there is conspicuous failure to see its

potential danger whenever wastes are not disposed in an aesthetic manner, or treated. It can be observed in Ado Ekiti that the level of household's involvement in environmental sanitation is generally worrisome and poor which often leads many environmental conditions that are unpleasing. There are several cases of health problems as well as challenges which are related to environmental sanitation most importantly in the level of household.

There have been several authors who has carried out researches on environmental sanitation [1,7,8] participation of households in expenditure among others, but with little or no focus on the health impact of household's participation in environmental sanitation over the years especially in the study area. Therefore, this research work will dig deep and look into this area which has not really been looked into in many previous researches carried on in the study area.

1.2 The Study Area

Ado-Ekiti is located between latitude 7°25'N and 7°45'N of the equator and between longitude 5°05'E and 5°30'E of the Greenwich Meridian as shown in Fig. 1. Ado-Ekiti has length has breadth of 32 and 28km respectively. It is about 199km to the Northern Ekiti and Erio to the north (43.5km), Ijero to the North East (7.5km), Southern and South Eastern to the South (59km) and Western Ekiti of the West (9km). Politically, Ado Ekiti is the capital city of Ekiti-State and has since 1996 enjoyed this status. Ado Ekiti has evolved and continued to enjoy urban status and adequately qualify to be called a city as it reflects in political, economic, social and cultural identity than many modern urban areas lack. Ado Ekiti last known population was put at is 424, 300 (NPC, 2006) with a growth rate of 3.2% per year, the projected population of Ado Ekiti will be 597,487 in 2020.

1.3 Climate and Vegetation

Ado Ekiti has tropical wet and dry climate which supports all grasses and other vegetation which is interspersed with short scattered trees (derived savanna). The climate is divided into two parts Northern derived savanna and Southern climatic belt. The city has a mean annual rainfall of about 1.318mm, there are double maximal rainfalls with the peak in June and September the rainfall is mainly concentrated between April and October, it rains for an average of 9-11 days per month

during this period except in September when it rains at least once in two days. The mean monthly temperature is very high ranging between 25°C and 28°C and in March reaching about 29°C the days are very hot during the dry season from November to January with temperature typically between 33°C TO 34°C while from February to April values are frequently between 34.6°C and 37°C.

Under the latter condition, air is generated by mechanical devices like fans, cannot have cooling effect on human body which maintained at a constant temperature of 36.7°C. the diurnal range of temperature of characteristically high for the city, the most suitable period is from June to October. Daytimes are very sunny with bright sunshine of about 6.5 to 7.7 hours daily from November to May while from June, August and September, the heavy cloud cover of the period reduces the time to between 3.3 to 4.4 hours.

2. LITERATURE REVIEW

In recent years, poor environmental quality has become widely acknowledged as a major hazard to social and economic progress, and even to human survival worldwide. In 2010, Acheampong published his first book [9]. Environmental degradation has a significant impact on developing countries, limiting and weakening their progress [10]. Uncontrolled littering, incorrect residential wastewater discharge, and poor sewage disposal have degraded the living environment. In addition, these behaviors contribute to the spread of contagious diseases (Adimekwe, 2013).

In addition to personal, household, and community hygiene, poor environmental sanitation practices contribute considerably to infant and child mortality [6]. All of this goes against the idea of environmental sanitation, which attempts to provide all human settlements with a clean, safe, and pleasant environment [11]. Human excreta, solid waste, wastewater, and disease vector management are all part of environmental sanitation and work together to create a sanitary environment, which is maintained by providing washing facilities for personal and household cleanliness [2].

As a result of increased engagement in environmental sanitation, a variety of development indicators are positively affected. Environmental sanitation, then, is a means of enhancing humans' well-being and promoting

their socioeconomic and physical growth [12]. The frequency of various diseases is lowered when people have access to and regularly use sufficient sanitary infrastructure, as established in several research investigations [13].

Environmental exposures, which may be avoided, are responsible for 24 percent of global diseases with high mortality rates [14]. But the majority of these deaths can be prevented with proper environmental sanitation.

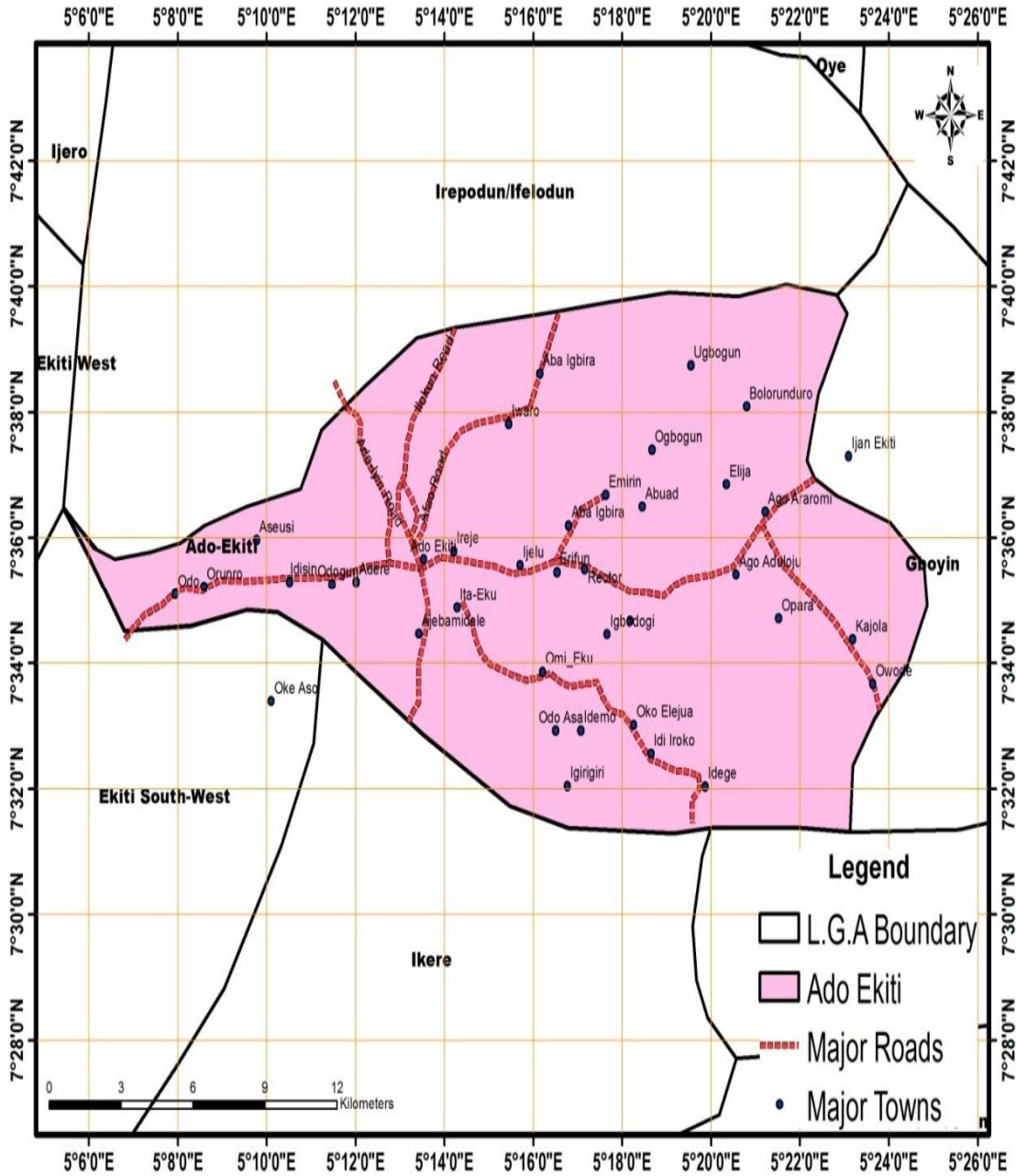


Fig. 1. Map of Ado Ekiti
 Source: Ekiti State University Cartographic Unit, 2020

Residents' participation in the provision, utilization, and maintenance of environmental sanitation facilities and services, as well as adherence to environmental legislation, are examples of environmental sanitation practices [15]. Unfortunately, in Nigeria, there is a lack of sufficient environmental sanitation procedures in place. Poor sanitation and a lack of basic amenities define these communities [16]. There is a severe lack of access to environmental sanitation facilities and services for the majority of citizens [17].

City populations in Nigeria are growing rapidly, but environmental sanitation systems and services are not keeping pace. Unsanitary and harmful environmental conditions are frequent in Nigerian metropolitan areas as a result of these factors [15]. There's no doubt that providing proper environmental sanitation facilities and services is at best a means to an end in light of the above. The end result is determined by the attitudes and behaviors of the stakeholders [10]. Good sanitation behavior and the availability of facilities and services must work in concert to accomplish optimal environmental sanitation practices [6]. A variety of social, economic and demographic factors influence environmental sanitation practices, as they do with other environmental management tasks. Other factors include level of information, religious participation, enabling laws, and place of residency, to name only a handful [6].

3. RESEARCH METHODS

This is a survey research; data was collected with the use of structured closed ended questionnaire. Yamane's (1967) sampling concept was used to calculate the number of samples needed for the research. A total of 320 copies of questionnaire were administered to the residents of Ado Ekiti. Using stratified sampling techniques, the 13 wards in Ado Ekiti will get 320 copies of questionnaires based on population strata of each wards in Ado- Ekiti. The wards with the highest population to the ward with 4th highest population got 30 copies of questionnaire each while the wards with the 5th highest population to the 8th highest population got 25 copies of questionnaire each, also wards with 9th highest population to the ward with 13th highest population got 20 copies of questionnaire each as shown in Table 1.

Systematic sampling method was used to administer the questionnaire i.e after the first house was selected, then the tenth house was selected and continued like that. The questionnaire was administered to the household heads in each houses selected in each wards, and in case the household heads are not available then anyone who is mature in the household responded on behalf of the household heads. Descriptive analysis was done with the use of frequency tables, percentage tables as well as charts.

Table 1. Population ranking of the wards and the copies of questionnaire that will be administered in each ward

Ranking of the wards according to population strength	Name and number of wards	Copies of questionnaire that will be administered
1	Dallimore, Adebayo, Adehun, Similoluwa, Olora lane, Ilokun and Irasa (ward 9)	30
2	Bamigboye, Mobil, Ijigbo, Ekute and Ajilosun (ward 4)	30
3	Irifin, Aso, Oke-epa, Oke-aso, Oke-osun, Ajebandele, Igirigiri, Ita-nla and Ita-eku (ward 13)	30
4	Better life, Ojumose and Oke-sha (ward 10)	30
5	Falegan, Irona, Olaoluwa and Omisanjana (ward 11)	25
6	Idemo, Idolofin, Imayo, Isolo, Irode and Oloke-meji (ward 3)	25
7	Isamo, Ireto, Inisa and Ado Grammar School (ward 2)	25
8	Idofin, Ilaro and Matthew Street (ward 1)	25
9	Oke-ila, Eka and Housing (Federal and State) (ward 7)	20
10	Okeyinmi (ward 6)	20
11	Ijoka, Orere-owu, Ajibade lane and Oja Oba (ward 5)	20
12	Ogbon Ado and Ogbon Oba (ward 8)	20
13	Igbeyin, Atikankan and Isato (ward 12)	20
Total		320

Source: Researcher's Compilation, 2021

4. FINDINGS AND DISCUSSION

In the data presented in Table 2 and Fig. 1, it can be seen that 47.1% of the respondents indicated that they always carry out environmental sanitation within their house every last Saturday of the month, 46.9% of them indicated that they always carry out environmental sanitation every weekend, while, 3.1% indicated that they engage in environmental sanitation within their household everyday, and lastly, just 2.8% of the respondent were of the opinion that they carry out environmental sanitation within their household twice in a week. This imply indicate that majority of the people or household in Ado Ekiti carry out environmental sanitation almost every last Saturday of the month with the enforcement of

WAI as well as every weekend, this can be said to be as a result of the fact that every Saturday is always regarded as a free day for many people. This corroborates with the assertion of Daramola [15] who indicated and argued that the most noticeable strategy employed by the government to enhance people’s participation in environmental sanitation in the early 1980s is the use of War Against Indiscipline (WAI) program. During this programme, it was set out in law that there should be three hours 7:00am – 10:00am set aside in last Saturday that ends the for the mass observance of Environmental Sanitation Exercise as citizens are restricted during this period and they are all expected to stay indoor to participate in the sanitation exercise within their household.

Table 2. Frequency of environmental sanitation

Responses	Frequency	Percentage %
Everyday	10	3.1
Twice a week	9	2.8
Every weekend	150	46.9
Last Saturday of the month	151	47.1
Total	320	100

Source: Field work, 2021

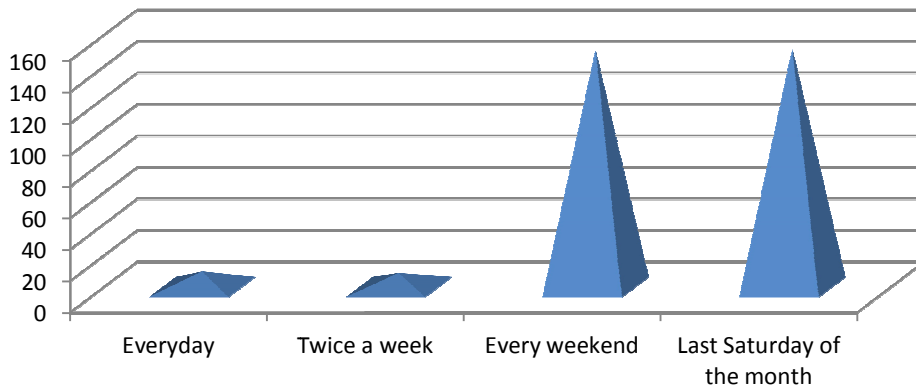


Fig. 1. Frequency of environmental sanitation

Source: Field work, 2021

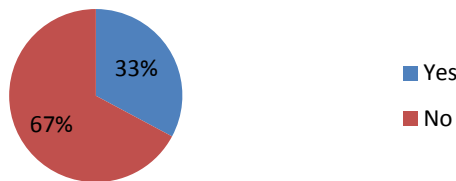


Fig. 2. I participate during environmental sanitation

Source: Field work, 2021

The data presented in Table 3 and Fig. 2 indicated that 32.8% of the respondents were of the opinion that they do participate personally during environmental sanitation, while on the other hand, 67.2% of the respondents indicated that do not participate in environmental sanitation. From this finding, it can be said that there is low turn up for environmental sanitation in the study area. Thus, this corroborates with previous findings of the study where it was indicated that there is low frequency of people's participation in environmental sanitation as Daramola [15] who indicated and argued that the most noticeable strategy employed by the government to enhance people's participation in environmental sanitation in the early 1980s is the use of War Against Indiscipline (WAI) program. During this programme, it was set out in law that there should be three hours 7:00am – 10:00am) set aside in last Saturday that ends the for the mass observance of Environmental Sanitation Exercise as citizens are restricted during this period and they are all expected to stay indoor to participate in the sanitation exercise within their household. This makes the people belief that there should only be participation in environmental sanitation only in the last Saturday that ends the month.

In the same vein, the data presented in Table 4 and Fig. 3 indicated that 49% of the respondents indicated that their household members' does not participate frequently during environmental sanitation, while on the other hand, 33.4% and 17.5% of them were of the opinion that their household members participate frequently during environmental sanitation. It can however be concluded from the finding that there is moderate

or average level of household members' participation in environmental sanitation in the study area. This is in line with the findings of Daramola [15] who argued that it can be observed that involvement of households' in environmental sanitation in the major cities in Nigeria is relatively worrisome; this has led to several unaesthetically pleasing condition of the environment. As most health cases and related challenges among people are conspicuously related and tied to poor level of involvement of household in environmental sanitation.

In the data presented in Table 5 and Fig. 4, it was indicated that 79.7% of the residents who responded indicated that there is a particular day set aside for environmental sanitation in my household, while 20.3% of the respondents had a different view. From all indications, it can be seen that there is a day set aside for environmental sanitation in the study area. This can also be observed from the assertion of Daramola [15] who indicated and argued that the most noticeable strategy employed by the government to enhance people's participation in environmental sanitation in the early 1980s is the use of War Against Indiscipline (WAI) program. During this programme, it was set out in law that there should be three hours 7:00am – 10:00am) set aside in last Saturday that ends the for the mass observance of Environmental Sanitation Exercise as citizens are restricted during this period and they are all expected to stay indoor to participate in the sanitation exercise within their household. Hence, it can be agreed that this is the only day majorly set aside for environmental sanitation at household level in the study area.

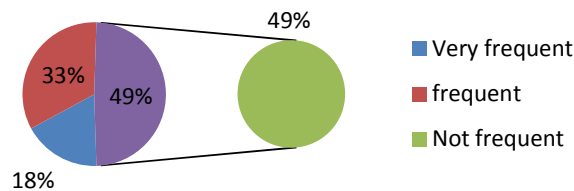


Fig. 3. Frequency of household members' participation during environmental sanitation

Source: Field work, 2021

Table 5. A day is set aside for environmental sanitation in my household

Responses	Frequency	Percentage %
Yes	255	79.7
No	65	20.3
Total	320	100

Source: Field work, 2021

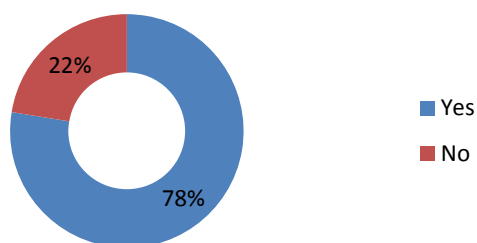


Fig. 4. A day is set aside for environmental sanitation in my household

Source: Field work, 2021

Table 6. Level of efficiency of the environmental sanitation

Responses	Frequency	Percentage %
Very efficient	35	13.7
Efficient	37	16.4
Not efficient	153	60.0
Total	320	100

Source: Field work, 2021

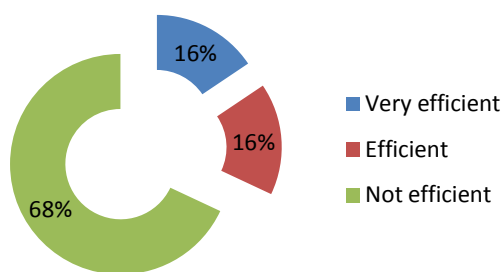


Fig. 5. Level of efficiency of the environmental sanitation

Source: Field work, 2021

In the data presented in Table 6 and Fig. 5, it can be observed that 60% of the respondents supported that environmental sanitation in the study is not efficient, while 16.4% and 13.7% of the respondents had a different view. It can be deduced from the response that there is low level of efficiency of environmental sanitation in the study as supported by majority of the

respondents. This corresponds with the assertion of Bello [10], who argued that it is evident that there is inefficiency of environmental sanitation in the major cities in the country which can be traced down to be as a result of the low level or inadequate provision of environmental sanitation facilities and services could.

Table 7. Government’s effort to encourage household members to participate in environmental sanitation

Responses	Frequency	Percentage %
provision of public waste bins	117	27.5
quick packing of waste dumped	109	25.0
public sensitization on the importance of clean environment	80	18.4
provision of waste disposal vans	79	18.2
others	50	11.5
Total	1061	100

Source: Field work, 2021

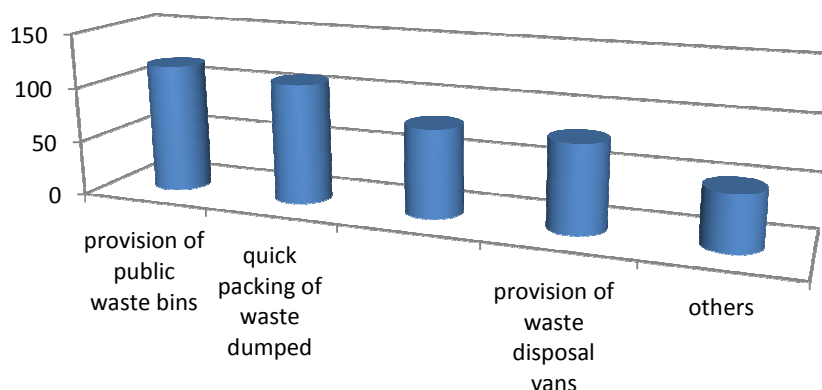


Fig. 6. Government’s effort to encourage household members to participate in environmental sanitation

Source: Field work, 2021

The data presented in Table 7 and Fig. 6 indicated that 27.5% and 25% of the respondents were of the opinion that Government’s effort to encourage household members to participate in environmental sanitation were in the form of provision of public waste bins and quick packing of waste dumped respectively. In the same vein, 18.4% and 18.2% of the respondents indicated that Government’s effort to encourage household members to participate in environmental sanitation were in the form were in the form of public sensitization on the importance of clean environment and provision of waste disposal vans while 11.5% of the respondents indicated that the efforts of the Government were in other forms. This however indicated that Government’s effort to encourage household members to participate in environmental sanitation were in numerous form, however, the question is, are these efforts effectively and efficiently directed and coordinated for effective results?. As Ekong [18] indicated that the poor and deplorable state of the physical environment in many Nigeria

cities calls for soberness from all stakeholders at different levels. Bello [10] also supported and indicated that the poor situation of environmental sanitation in Nigeria undermine the development of the nation as the practices are not properly followed which can be traced down to in ineffectiveness of all stakeholders. Akpabio (2012) also supported that the practices of environmental sanitation is character and always marred by the lack of environmental sanitation facilities which should be provided by the stakeholders, hence, leading to poor sanitation behaviour down to household level.

5. CONCLUSION

Findings further revealed that there is low turn up for environmental sanitation in the study area; it also indicated that there is moderate or average level of household members’ participation in environmental sanitation in the study area. In the same manner, findings further revealed that there are several cases of health problems and

challenges related to poor involvement of the people in environmental sanitation most especially at the household level. In the same manner, there is a day set aside for environmental sanitation in the study area, however, despite this, there is low level of efficiency of environmental sanitation as supported by majority of the respondents.

Furthermore, the study revealed that Government's effort to encourage household members to participate in environmental sanitation were in numerous form such as but not limited to the provision of public waste bins, quick packing of waste dump, public sensitization on the importance of clean environment, provision of waste disposal vans. In the same manner, findings from the study also revealed that level of illiteracy, level of importance they attached to it, economic status, availability of environmental sanitation facilities, level of enforcement among others are the factors affecting the participation of household members in household's sanitation.

7. RECOMMENDATIONS

It is therefore recommended that improvement of the standards of environmental sanitation should not be taken with levity hands by all tiers of government, as they should develop policies that would be geared towards improving people's participation in household environmental sanitation in the study area and other parts of the country.

Furthermore, environmental sanitation should not be only seen based on the periodic promulgation as stipulated by the law but should be seen by all citizens as a civic responsibility that needs to be done by all, there should also be the development of programmes geared towards the promotion of people's behavioural change that would enhance the promotion of people's participation in household based environmental sanitation.

In the same manner, there should be vigorous enforcement of environmental sanitation laws; there should also be proper coordination of all agencies that have certain roles to play in encouraging people to participate in environmental sanitation in the study area, as the improvement in their level of effectiveness would ensure the execution of the law.

In the same vein, there should be proper punishment of household members that fails to

participate in environmental sanitation at the household level, if they are treated as scapegoats, this will scare others away from environmental misconduct.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:

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