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AWARENESS AND COMPLIANCE OF ANAMBRA RESIDENTS TO MEDIA CAMPAIGN ON PREVENTION OF IMPROPER DISPOSAL OF SOLID WASTE.

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ABSTRACT
Environmental challenges arising from improper disposal of solid waste are now major issues in many Nigerian urban cities and rural communities, including Onitsha and Awka in Anambra State. Among the things the challenges have done, is raise the questions as to whether residents of Awka and Onitsha are aware that such improper disposal can endanger people's health and lives and what they stand to gain if they start disposing of their solid waste properly. It is to help answer these questions that the researcher decided to conduct a study on the "Awareness and Compliance of Anambra Residents to Media Campaigns on the Prevention of Improper Disposal of Solid Waste". This study, was aimed at finding out Onitsha and Awka residents' medium of exposure to campaigns on the prevention of improper disposal of solid waste, their level of awareness of the selected campaigns on the prevention of improper disposal of solid waste, their level of compliance to the campaigns on the prevention of improper disposal of solid waste and the extent the selected campaigns make them dispose of their solid wastes properly. To explain this study and achieve the objectives, the researcher adopted the agenda-setting theory, health belief model and the theory of planned behaviour and used the descriptive survey design, respectively. She determined the samples of four hundred (400) using Taro Yamane formula and selected the samples using multi-stage sampling procedure and convenience sampling technique. Frequency tables and simple percentages were used to analyze the findings of this study. From this study, the researcher found, among others, that residents of the Onitsha and Awka residents have a high level of awareness of campaigns on the prevention of improper disposal of solid waste. Based on the findings of the researcher, she recommended, among others, that Anambra State Government should continue with its campaigns on the prevention of improper disposal of solid waste and work to gain the trust of residents of the State.

Keywords: Awareness, Campaigns, Compliance, Disposal, Improper, Prevention, Solid Waste.

INTRODUCTION
The generation of waste in any society is a combination of some factors which include population, lifestyle of the people, socio-cultural background and composition of materials for usage by the households (Opaluwa & Ibrahim, 2022). Therefore, solid waste generation is mainly driven by population growth, technological advancements and economic development globally (Singh, Laurenti, Sinha & Frostell, 2014). Furthermore, El-Fadel and Maalouf (2019) observed that over 2 billion tons (BT) of solid waste are generated annually in large cities with projections to reach 3.4 BT by 2050 worldwide. This is particularly so in developing economies where waste generation rate is expected to increase by three folds by 2050 (Kaza, Yao, Bhada-Tata & Van-Woerden, 2018).

In Anambra State in particular, Mr. Amechi Akora, the former Managing Director, Anambra State Waste Management Authority, was reported by Premium Times (2021) to have disclosed that Awka, the State capital, alone, generates more than 400 tons of solid waste daily, out of which only 30 percent is collected. According to him, other major commercial centers in the state such as Nnewi and Onitsha also generate huge

tons of waste daily. He stated that most of the wastes are generated by households and in some cases, by institutions, corporate organizations, local industries, artisans and traders which litter the immediate surroundings.
According to UNICEF (2006), solid wastes are discarded materials, generated from industries, commercial places or homes, which are no longer of any economic value. Solid waste refers to the organic and inorganic used-up materials that encompass both a heterogeneous mass of wastes (domestic) as well as a more homogeneous accumulation of agricultural, industrial and mineral wastes (Karsauliya, 2013). Nabegu (2010) views it as a resource that should be recycled for further usage rather than being discarded to constitute a nuisance. "Waste can be domestic or industrial. While domestic solid wastes are generated from homes, industrial wastes are the wastes generated by industries, organizations, schools and businesses" (Ukala, Akaun & Owamah, 2020, p. 169).

In Onitsha particularly, Obianeri (2022) observed that major drainage channels, have been blocked as a result of indiscriminate dumping of refuse by residents and traders in the areas. He stated that the refuse dumps in some cases, have encroached on the streets, blocking drainage, and defacing the aesthetic of the neighbourhoods. Specifically, he equally stated that the refuse at Upper Iweka junction, Egerton main Market road and Okpoko, were as tall as a storey building and that behind the motor parks at Upper Iweka, the drainage running through the main road, has heaps of refuse which remain an eyesore, even as passersby always cover their nostrils while crossing the road as a result of the stench
For an uninterrupted evacuation of the wastes given the enormous task to be carried out, Obianeri (2022) reported that the governor of Anambra state, Professor Chukwuma Soludo, directed a partial lockdown on Onitsha North and Onitsha South. Despite this, Obianeri (2022) reported that in some locations, waste management workers did not do a thorough job as they left over a half of the waste unattended to while refuse on major roads and locations like the Upper Iweka end of the Aguata road, MCC, Cemetery Road and Egerton were not totally removed and are now rapidly rising almost back to its former height with the refuse collectors not in sight.

In Awka, there is improper disposal of solid waste (Nnatu, 2018). According to her, wastes are often indiscriminately dumped on open plots of land particularly along the streets in Awka. In streets where the refuse containers provided by the State Government, are, individual households deposit waste on the ground each time the containers are filled to the brim (Nnatu, 2018). In the same manner, the residents who are not close to the locations where the disposal bins are, deposit solid wastes on any vacant land which is converted into an unofficial dump site (Nnatu, 2018). It is therefore, not unusual to see full containers with refuse piled at the sides with rats, goats, chickens scavenging on the garbage heaps (Nnatu, 2018).
To avoid suffering the consequences of indiscriminate disposal of solid wastes, there is need for Onitsha and Awka residents to start disposing solid wastes properly. To make them know this and change their ways, Anambra state government through the Anambra Ministry of Environment and Wazobia FM decided embark on television (Anambra Broadcasting Service Television) and radio campaigns on the prevention of improper solid waste disposal in the state, respectively. This study, therefore, seeks to find out Onitsha and Awka residents' level of awareness and compliance with the campaigns.

LITERATURE REVIEW

Emperical studies

In the course of assessing solid waste management system in Lokoja metropolis, Opaluwa and Ibrahim (2022) adopted systematic sampling technique in sampling five areas in Lokoja town and conducted a structured interview on the operational heads of Kogi State Sanitation and Waste Management Board (KSWMB). They acquired and analyzed information on adequate working equipment, staff and solid waste handling concept and data on the monthly volume of waste generated and collected from 2013-2018. They found from this study, among others, that inadequate manpower and equipment are the greatest challenges militating against the Board and that there are no landfill sites and incinerators in Lokoja, Kogi state. Based on all they found, they recommended, among others that there should be provision of designated sanitary

landfill by the state government to allow for proper waste management in the municipal area. This study was conducted in Kogi State while the current study was conducted in Anambra State.
In another study to determine the socio-demographic correlates of solid waste disposal knowledge, attitude and practices among market traders in Calabar municipality, Nigeria, Ekoro, Olanrewaju, Ugbe, Inyang-Ogim and Okoi (2021) did a cross-sectional study of 480 traders across six markets in the area. They collected data from the respondents that they studied using semi-structured questionnaire and analyzed it using descriptive and inferential statistics. Their findings from this study shows that age, primary education, being married, being separated/divorced, being muslim and being a traditionalist are statistically significantly associated with knowledge, attitude and practices of solid waste disposal among the market traders while their solid waste disposal practices are poor. These findings made them recommend, among others, that market sensitizations on environmental sanitation should be carried out. This study was carried out in Calabar, the capital of Cross River State while the current study was carried out in Onitsha and Awka in Anambra State.

Assessing college students' knowledge and attitudes towards solid waste management in North Central zone of Nigeria, Dung, Mankilik and Ozoji (2017) did a cross-sectional survey and used questionnaire to collect data from 1,800 part three NCE students of six colleges of education. Their findings indicate, among others, that the students have a low knowledge level of solid waste management while their attitudes towards it, is positive. Based on all they found from this study, they recommended that environmental education issues, especially, solid waste management, should be incorporated into colleges of education curricula and properly taught for in-depth knowledge acquisition. This study was carried out in Nigeria's North Central region while the current study was carried out in Nigeria's South East State of Anambra.
To determine residents' perception of solid waste disposal practices in Sokoto, Northwest, Nigeria, Kaoje, Sabir, Yusuf, Jimoh and Raji (2017) conducted a descriptive cross sectional survey in Sokoto metropolis and used multi-stage sampling technique to select the respondents they studied using questionnaire. Their findings from this study, show, among others, that although majority of the respondents were disturbed with the way refuse litters the state metropolis, many are unaware of its health-related problems. Based on all they found, they recommended, among others, that the government should promote local community capacity through sensitization and awareness creation. This study focused on perception of solid disposal practices while the current study focused on broadcast media campaigns on the prevention of improper solid waste disposal.

To ascertain the contributions of solid waste disposal practice to malaria prevalence in Ilorin, Nigeria, Mokuolu, Coker and Sridhar (2016) studied 200 households using questionnaire and recorded the data they obtained from the study on the study profoma and computed it using Statistical Software Package. From this study of theirs, they found, among others, that open drainage is a significant factor to malaria prevalence in the area and that solid wastes in the drainages contain mainly nylons, leaves, rags, papers, empty cans, broken local pot and human excreta. Based on all they found, they recommended, among others that public toilets should be constructed. This study was conducted in Ilorin, the capital of Kwara State while the current study was conducted in Onitsha and Awka which are in Anambra State.
In their bid to determine the practice, pattern and challenges of solid waste management in Onitsha metropolis, Nigeria, Emelumadu, Azubike, Nnebue, Azubike and Sidney-Nnebue (2016) did a cross-sectional study of 425 households in Onitsha metropolis. They selected the respondents they studied using multi-stage sampling technique and collected data from them by interview using a pre-tested semi-structured questionnaire. Their findings which they analyzed using computer Graph Pad Prism version 5.3 shows, among others, that majority (68.5%) of Onitsha residents dispose their generated wastes via government agencies or private contractors while more than one tenth of the generated waste is not accounted for. From these findings, they recommended, among others, that proper waste management policy should be formulated and implemented while government and private partners should direct adequate efforts towards the provision of adequate home collection services. This study focused on the practice, pattern and challenges of solid waste management in Onitsha metropolis while the current study focused on the awareness and

compliance of Onitsha and Awka residents to broadcast media campaigns on the prevention of improper solid waste disposal.

To find out the influence of broadcast media enlightenment campaigns on solid waste management in South-South Nigeria, Idamah (2015) adopted survey and content analysis methods and used questionnaire and interview to obtain data from the respondents he determined and selected purposively and with the use of Taro Yamani formula and multi-stage sampling technique respectively, from all the states in the South-South region. The findings of their study shows that there are irregular and poor broadcast media enlightenment campaigns on solid waste management in the six states which resulted in the poor attitude of residents of the states. Based on his findings, he recommended, among others, that the mass media in Nigeria should regularly sensitize the public on the need to manage wastes and other environmental issues properly. The study focused on some broadcast media campaigns on solid waste management but they are different from the broadcast media campaigns which the current study focused on.

In their study of a disciplinary problem of students' waste disposal in Nnamdi Azikiwe University, Awka, Okoye, Onyali and Ezeugbor (2015) randomly selected 819 fourth year students from 13 faculties in the school using 30% of students' population in each faculty and administered questionnaires to them. Findings from their study, shows that students indiscriminately dispose wastes. This made them recommend, among others, that the school management should organize workshops and seminars to change students' psyche about waste disposal while government should enhance provisions of needed facilities for proper disposal of wastes in schools. This study focused on the problem of waste disposal in Nnamdi Azikiwe University, Awka while the current study focused on the problem of improper solid waste disposal in Onitsha and Awka.

In an investigation to ascertain waste management strategies for proper household hygiene in Orumba-South Local Government Area of Anambra state, Nigeria, Nnubia (2014) used questionnaire to collect relevant data from a sample of 200 households in the area who she randomly selected for this study. from this study of hers, she found, among others, that most households in the area dispose their waste by indiscriminately dumping it on roadsides, sumps and streams using discarded containers as waste bins. Based on all she found, she recommended that Local Government authority should provide enough disposal facilities at adequate points taking into consideration the destiny of settlements. This study was conducted in Orumba-South Local Government Area of Anambra State while the current study was conducted in Onitsha and Awka.

In their own assessment of public awareness and knowledge of mass media campaigns on environmental issues in South-South zone, finally, Enobakhare, Orem and Ogar (2013) carefully collected data from the respondents they studied through the instrumentality of questionnaire and analyzed it using tables, bar and pie charts. Their findings show that South-South populaces are aware and have good knowledge of sensitization campaigns about environmental management issues while their attitude in regards to environmental management has changed positively as a result of the media campaigns. Based on these findings of theirs, they recommended, among others, that the media should not down play the issue of environmental hazards and should play the agenda function by emphasizing on the effects of environmental degradation. This study focused on mass media campaigns on environmental issues in the South South zone while the current study focused on improper solid waste disposal in the South East State of Anambra.

Literature Gap

The above review of empirical studies, reveals that all the past researchers cited in the review, focused on solid waste management in one way or another. While some of them (Emelumadu *et al.*, 2016; Ekoro *et al.*, 2021; Okoye *et al.*, 2015; Opaluwa & Ibrahim, 2022, Mokuolu *et al.*, 2016; Kaoje *et al.*, 2017; Dung *et al.*, 2017; Nnubia, 2014) focused on the practice, knowledge, pattern, challenges, perception and attitudes of/towards solid waste management, others (Idamah, 2015; Enobakhare *et al.*, 2013) focused on the influence, awareness and knowledge of mass media campaigns on solid waste management and environmental issues. Out of all the past researchers that were cited, only Emelumadu *et al.*, (2016) studied Onitsha residents. Since none of the past researchers studied Onitsha and Awka residents in terms of their awareness and compliance with the broadcast media campaigns the current study is about, it is the

researcher's opinion that it is a knowledge gap. It is to fill this gap, that the researcher decided to do this current research.

Theoretical Framework

Agenda-setting Theory

The power of the media to set society's agenda by focusing public attention on few key public issues is an immense and well-documented phenomenon (Okafor, 2014). It was McCombs and Shaw that carried out the first systematic study of the agenda-setting hypothesis (see McCombs & Shaw, 1972). The agenda setting theory posits that what the media finds important, will eventually be mirrored by what members of society will come to think are important. It facilitates the formation of public opinions and the distribution of pros and cons of a particular issue (Okafor, 2014). Agenda-setting shifts the focus of attention away from immediate effects on attitudes and opinions to long term effects on cognitions (Protess & McCombs 1991). Lang and Lang (1959) agree that not only do people acquire factual information about public affairs from the media, readers and viewers also learn how much importance to attach to a topic on the basis of the emphasis placed on it in the news. Newspapers provide a host of cues about the salience of the topics in the daily news, like lead story on page one, other front page display, large headlines, etc. Television news also offers numerous cues about salience as well as the opening story on the newscast, length of time devoted to the story.

What makes this theory ideal for this study is that it posits that "the more the media place emphasis on an issue or event, the more people see such an issue or event as important" (Agbanu, 2013, p. 113). Since the Anambra Broadcasting Service Television and Wazobia FM emphasize more on the prevention of improper disposal of solid waste (the issue) by airing it continuously for their target viewers and listeners to see it as important, it means that such emphasis could make Onitsha and Awka residents, who are also part of the viewers and listeners, see it as important to the extent of adopting the solid waste disposal methods recommended in the respective campaigns

Health Belief Model

The health belief model was developed in 1950 by a group of social psychologists, Hochbaum, Rosenstock, and Kegels (1952), who worked in the American public health service and sought to identify inadequacies that prevent people from participating in disease prevention or diagnosis programs. The group wanted to explain why few people participate in prevention and diagnosis programs. After introducing the basic concepts of this model, in 1966, Rosenstock (2005) introduced the official model of health belief. In 1974, Maiman and Becker (1974) completed this pattern together. According to Maiman and Becker (1974), the basic components which explain the health belief model are:

Perceived Susceptibility/Vulnerability: This pattern dimension refers to a person's perception of being at risk for the disease, and the person must believe that he or she may be infected without the symptoms being apparent. For example, in terms of pattern, a person's likelihood of engaging in cancer-preventing behaviour (smoking cessation, low-fat, high-fiber diet, exercise, mammography, prostate testing) depends on how much he or she believes in cancer susceptibility (Hayden, 2009; Sim, Moey & Tan, 2014).

Perceived Severity/Seriousness: This dimension of the model evaluates clinical medical results, based on which the rate of mortality, disability, pain due to the disease is evaluated, and the severity of the disease is determined based on the mentioned symptoms. In other words, this issue refers to the severity and seriousness of the disease (Jeihooni, Kashfi, Shokri, Kashfi & Karimi, 2017; Dewi & Umijati, 2020).

Perceived benefits: It means a person's belief in the effectiveness of action in reducing the threat of disease. For example, a person who does not accept the causal link between smoking and lung cancer is less likely to quit smoking because he or she believes that smoking cessation will not prevent the disease. Once a person has accepted the susceptibility of the disease and realized its seriousness, the next step is to adopt a preventive behaviour or act on the disease (Champion & Skinner, 2008; Dewi & Umijati, 2020).

Perceived barriers: In the path of health behaviours, there are costs, time, facilities, the scope of necessary changes, and an inability to understand the recommended behaviours that the individual is evaluating. Barriers are related to therapeutic characteristics and preventive measures that may be expensive, unpleasant, painful, etc. These traits may lead to a person avoiding the desired behaviour.

Cues to action: To begin with, guidance and stimuli are needed. These stimuli are the accelerating forces that make a person feel the need to react. Or some factors increase the likelihood of perceiving the risk and thus taking the necessary action by reminding and warning about a potential health problem (Pálsdóttir, 2008).
Self-efficacy: This (self-efficacy) was added to the model in 1988 (Champion & Skinner, 2008). Self-efficacy is the individual's belief that he or she can attempt a behaviour and be successful if he/she does. The belief that the individual can perform the behaviour and get positive results motivates him/her strongly. In this way, he takes action more easily than the individual with low self-efficacy.

Theory of Planned Behaviour (TPB)
The theory of planned behaviour was proposed by Ajzen (1985). It emerged from the theory of reasoned action which was developed by Ajzen and Fishbein (1980). The theory of planned behavior has been applied in various disciplines such as academic misconduct in educational institutions (Kisamore, Jawahar & Stone 2010 cited in Dalmas & Ngahu, 2018) and health sector in understanding hormone replacement therapy (Quine & Rubin, 1997).
Despite being suitable for the explanation of this study, the theory has had its share of assumptions and criticisms. The theory assumes that an individual has acquired the opportunities and resources to be successful in performing the behaviour of interest regardless of the intention but does not incorporate other factors into behavioral intentions such as threat or past experience, normative influences such as environmental or economic factors (Dalmas & Ngahu, 2018). The theory does not give time frame between intent and behavioural action and does not expound on actual control over behavior (LaMorte, 2018).

METHODOLOGY
For this study, the researcher explained the empirical process followed in carrying out this research. The researcher specifically looked at the research design that this study was hinged on, the study area, study population, what constitutes the sampling frame of this study, the sample size of this study, the sampling technique that was used in selecting the samples, the variables that were measured, the data collection instrument of this study and the methods that were adopted in collecting data from the respondents and analyzing them.
Based on the above, the researcher adopted the descriptive survey research design for this study. This is because it is used mainly for the purpose of identification, description, explanation and prediction of states of affairs about certain phenomena and variables, and their interrelations in a natural setting overtime and different age-related groups (Christopher & Udoh, 2020).
Since Onitsha and Awka residents are the people under investigation and there are four Local Government Areas in Onitsha and Awka, respectively, which are Onitsha North, Onitsha South, Awka North and Awka South, their respective 2006 populations according to the National Population Commission (2006) was 125, 918 (Onitsha North), 137, 191 (Onitsha South), 112, 192 (Awka North) and 189, 654 (Awka South). Since these population figures are old, the researcher projected the current population of Onitsha North residents using the United Nations Population Fund's annual population growth projection rate of 3.2% and the formula below:
Pp = Gp x Pi x T.
Where Pp = Projected population
Gp= Given population (as at the time of the last census)
Pi= Population increase index
T= Period between the given population and the year of study
Thus; Pp= Gp= 125, 918 x Pi= 3.2% (0.032) x T= 2023-2006= 17
Pp= 125, 918 x 0.032 x 17 = 68, 499.4
This shows that the population of Onitsha North residents grew by 68, 499
The 2023 projected population of Onitsha North residents is therefore, 125, 918 + 68, 499 = 194, 417
To determine the projected current population of Onitsha South residents, the researcher will use the same formula as used above, below:
Pp = Gp x Pi x T.

Where Pp = Projected population
Gp= Given population (as at the time of the last census)
Pi= Population increase index
T= Period between the given population and the year of study
Thus; Pp= Gp= 137, 191 x Pi= 3.2% (0.032) x T= 2023-2006= 17
Pp= 137, 191 x 0.032 x 17 = 74631.9
This shows that the population of Onitsha South residents grew by 74, 632.
The 2023 projected population of Onitsha South residents is therefore, 137, 191 + 74, 632 = 211, 823.
To determine the projected current population of Awka North residents, the researcher will use the same formula as used above, below:
Pp = Gp x Pi x T.
Where Pp = Projected population
Gp= Given population (as at the time of the last census)
Pi= Population increase index
T= Period between the given population and the year of study
Thus; Pp= Gp= 112, 192 x Pi= 3.2% (0.032) x T= 2023-2006= 17
Pp= 112, 192 x 0.032 x 17 = 61032.4
This shows that the population of Awka North residents grew by 61, 032.
The 2023 projected population of Awka North residents is therefore, 112, 192 + 61, 032 = 173, 224.
To determine the projected current population of Awka South residents, the researcher will use the same formula as used above, below:
Pp = Gp x Pi x T.
Where Pp = Projected population
Gp= Given population (as at the time of the last census)
Pi= Population increase index
T= Period between the given population and the year of study
Thus; Pp= Gp= 189, 654 x Pi= 3.2% (0.032) x T= 2023-2006= 17
Pp= 189, 654 x 0.032 x 17 = 103171.8
This shows that the population of Awka South residents grew by 103, 172.
The 2023 projected population of Awka South residents is therefore, 189, 654 + 103, 172 = 292, 826.
Based on the above, the total projected population of Onitsha North, Onitsha South, Awka North and Awka South residents which will serve as the population of this study is 194, 417 + 211, 823 + 173, 224 + 292, 826 = 872, 290

Since the population of Onitsha and Awka residents is high, there is need for the researcher to have a sample. To determine the sample size of Onitsha and Awka residents, the researcher will employ the Taro Yamane formula below;

$$n = \frac{N}{1+N(e)^2}$$

Where n = sample size
N= Population of the study
e= Sampling error (0.05)
1 = Constant

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{872{,}290}{1+872{,}290(0.05)^2}$$

$$n = \frac{872{,}290}{1+872{,}290\ x\ 0.0025}$$

$$n = \frac{872{,}290}{1+2180.725}$$

$$n = \frac{872{,}290}{2181.725}$$

$$n = 399.8$$

$$n = 400$$

With the above sample size, the sample was allotted to the respective residents of the four Local Government Areas under study using the formula below to ensure proportionality. The formula is as follows:

$$R = \frac{I \times S}{N}$$

Where R = Number of respondents allotted to a Local Government Area
I = Resident population of a Local Government Area
N = Total population of the four Local Government Areas
S = Sample size

Onitsha North Local Government Area

$$\frac{194417}{872290} \times 400 = 89$$

Onitsha South Local Government Area

$$\frac{211823}{872290} \times 400 = 97$$

Awka North Local Government Area

$$\frac{173224}{872290} \times 400 = 80$$

Awka South Local Government Area

$$\frac{292826}{872290} \times 400 = 134$$

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Analysis of Data on the Research Questions

Research Question 1: What is Onitsha and Awka residents' medium of exposure to campaigns on the prevention of improper disposal of solid waste?

Onitsha residents' medium of exposure to campaigns on the prevention of improper disposal of solid waste.

Table 1:

Variables	Responses of Onitsha Residents	Percentage
Television	82	44
Radio	18	10
Newspaper	26	14
Magazine	0	0
Word-of-mouth	52	28
Billboard	8	4
Total	**186**	**100**

Source: Researcher's Field survey, 2023

The above table, shows that 82 (44%) out of the 186 Onitsha respondents that were studied in Onitsha, indicated that television is their medium of exposure to campaigns on the prevention of improper disposal of solid waste while 18 (10%) out of the 186 respondents indicated that radio is their medium of exposure to the campaigns. Also out of the 186 respondents, 26 (14%) respondents indicated that newspaper is their medium of exposure to the campaigns while 52 (28%) respondents indicated that word-of-mouth is their medium of exposure to the campaigns. Out of the same 186 respondents that were studied, 8 (4%) respondents indicated that billboard is their medium of exposure to the campaigns while none of the respondents indicated that magazine is their medium of exposure to the campaigns.

Based on the above finding, television is Onitsha residents' medium of exposure to campaigns on the prevention of improper disposal of solid waste.

Awka residents' medium of exposure to campaigns on the prevention of improper disposal of solid waste.

Table 2:

Variables	Responses of Awka Residents	Percentage
Television	34	16
Radio	78	36
Newspaper	28	13
Magazine	8	4
Word-of-Mouth	40	19
Billboard	26	12
Total	**214**	**100**

Source: Researcher's Field Survey, 2023

The above table, shows that 34 (16%) out of the 214 Awka respondents that were studied in Awka, indicated that television is their medium of exposure to campaigns on the prevention of improper disposal of solid waste while 78 (36%) out of the 214 respondents indicated that radio is their medium of exposure to the campaigns. Also out of the 214 respondents, 28 (13%) respondents indicated that newspaper is their medium of exposure to the campaigns while 8 (4%) respondents indicated that magazine is their medium of exposure to the campaigns. Out of the same 214 respondents that were studied, 40 (19%) respondents indicated that word-of-mouth is their medium of exposure to the campaigns while 26 (12%) of the respondents indicated that billboard is their medium of exposure to the campaigns.

Based on the above finding, radio is Awka residents' medium of exposure to campaigns on the prevention of improper disposal of solid waste.

Research Question 2; What is Onitsha and Awka residents' level of awareness to campaigns on the prevention of improper disposal of solid waste?

Onitsha residents' level of awareness to campaigns on the prevention of improper disposal of solid waste.

Table 3:

Variables	Responses of Onitsha Residents	Percentage
Very High	50	27
High	88	47
Low	11	6
Very Low	37	20
Total	**186**	**100**

Source: Researcher's Field Survey, 2023

The table above shows that out of the 186 Onitsha respondents that were studied, 50 (27%) indicated that their level of awareness to campaigns on the prevention of improper disposal of solid waste, is very high while 88 (47%) respondents indicated that their level of awareness to the campaigns is high. 11 (6%) out of the 186 respondents, however, indicated that their level of awareness to the campaigns is low while the remaining 37 (20%) respondents indicated that their level of awareness to the campaigns is very low.

Based on this finding, Onitsha residents' level of awareness to campaigns on the prevention of improper disposal of solid waste is high.

Awka residents' level of awareness to campaigns on the prevention of improper disposal of solid waste.

Table 4:

Variables	Responses of Awka Residents	Percentage
Very High	60	28
High	104	49
Low	30	14
Very Low	20	9
Total	**214**	**100**

Source: Researcher's Field Survey, 2023

The table above shows that out of the 214 Awka respondents that were studied, 60 (28%) indicated that their level of awareness of campaigns on the prevention of improper disposal of solid waste, is very high while 104 (49%) respondents indicated that their level of awareness to the campaigns is high. 30 (14%) out of the 214 respondents, however, indicated that their level of awareness to the campaigns is low while the remaining 20 (9%) respondents indicated that their level of awareness to the campaigns is very low.

Based on this finding, Awka residents' level of awareness to campaigns on the prevention of improper disposal of solid waste is high.

Research Question 3; What is Onitsha and Awka residents' level of compliance with campaigns on the prevention of improper disposal of solid waste?

Onitsha residents' level of compliance with campaigns on the prevention of improper disposal of solid waste.

Table 5:

Variables	Responses of Onitsha Residents	Percentage
Very High	10	5
High	22	12
Low	84	45
Very Low	70	38
Total	**186**	**100**

Source: Researcher's Field Survey, 2023

The table above shows that out of the 186 Onitsha respondents that were studied, 10 (5%) indicated that their level of compliance with campaigns on the prevention of improper disposal of solid waste, is very high while 22 (12%) respondents indicated that their level of compliance with the campaigns is high. 84 (45%) out of

the 186 respondents, however, indicated that their level of compliance with the campaigns is low while the remaining 70 (38%) respondents indicated that their level of compliance with the campaigns is low.
Based on this finding, Onitsha residents' level of compliance with campaigns on the prevention of improper disposal of solid waste is low.

Awka residents' level of compliance with campaigns on the prevention of improper disposal of solid waste.

Table 6:

Variables	Responses of Awka Residents	Percentage
Very High	44	21
High	24	11
Low	54	25
Very Low	92	43
Total	**214**	**100**

Source: Researcher's Field Survey, 2023

The table above shows that out of the 214 Awka respondents that were studied, 44 (21%) indicated that their level of compliance with campaigns on the prevention of improper disposal of solid waste, is very high while 24 (11%) respondents indicated that their level of compliance with the campaigns is high. 54 (25%) out of the 200 respondents, however, indicated that their level of compliance with the campaigns is low while the remaining 92 (43%) respondents indicated that their level of compliance with the campaigns is very low.
Based on this finding, Awka residents' level of compliance with campaigns on the prevention of improper disposal of solid waste is very low.

Research Question 4; To what extent do the campaigns on the prevention of improper disposal of solid waste make Onitsha and Awka residents dispose of their solid waste properly?

The extent that campaigns on the prevention of improper disposal of solid waste made Onitsha residents dispose of their solid waste properly.

Table 7:

Variables	Responses of Onitsha Residents	Percentage
Very High	19	10
High	20	11
Low	86	46
Very Low	61	33
Total	**186**	**100**

Source: Researcher's Field Survey, 2023

The table above shows that out of the 186 Onitsha respondents that were studied, 19 (10%) indicated that the campaigns on the prevention of improper disposal of solid waste make them dispose of their solid waste properly to a very high extent while 20 (11%) respondents indicated that the campaigns make them dispose of their solid wastes properly to a high extent. 86 (46%) respondents out of the 186 respondents that were studied, however, indicated that the campaigns make them dispose of their solid wastes properly to a low extent while the remaining 61 (33%) respondents indicated that the campaigns make them dispose of their solid wastes properly to a very low extent.
on the above finding, the campaigns make Onitsha residents dispose of their solid wastes properly to a low extent. Based

The extent that campaigns on the prevention of improper disposal of solid waste made Awka residents dispose of their solid waste properly.

Table 8:

Variables	Responses of Onitsha Residents	Percentage
Very High	41	19
High	27	13
Low	64	30
Very Low	82	38
Total	**214**	**100**

Source: Researcher's Field Survey, 2023

The table above shows that out of the 214 Awka respondents that were studied, 41 (19%) indicated that the campaigns on the prevention of improper disposal of solid waste make them dispose of their solid waste properly to a very high extent while 27 (13%) respondents indicated that the campaigns make them dispose of their solid wastes properly to a high extent. 64 (30%) respondents out of the 214 respondents that were studied, however, indicated that the campaigns make them dispose of their solid wastes properly to a low extent while the remaining 82 (38%) respondents indicated that the campaigns make them dispose of their solid wastes properly to a very low extent.

Based on the above finding, the campaigns make Awka residents dispose of their solid wastes properly to a very low extent.

Discussion of Findings

From this study, the researcher found that Onitsha and Awka residents' respective media of exposure to campaigns on the prevention of improper disposal of solid waste, are television and radio. This must be because the public holds the media in high esteem in terms of information and enlightenment (Idamah, 2015). Since the residents of Onitsha and Awka are also members of the public, it means that they hold their media of exposure in high esteem in terms of information and enlightenment. If not, they would not have their media of exposure let alone being exposed to the campaigns. In the case of Onitsha residents, it is either the factors responsible for this outcome are the level of electricity supply in the area, Anambra Broadcasting Service Television's (ABS) level of coverage, the income level of Onitsha residents, the amount of time they watch television, or other factors. In the case of Awka residents on the other hand, the factors are either the low price of radio compared to television, the amount of time they listen to radio, their income level or other factors. Whatever the reason is, it can be said that those that used radio and television for the campaigns they were exposed to, achieved their goal of getting their messages across to them. It also means that the broadcast media can be relied on for the effective dissemination of campaigns like the ones under study across to Onitsha and Awka residents.

Regarding Onitsha and Awka residents' level of awareness to campaigns on the prevention of improper disposal of solid waste, the researcher found that residents of the two areas have a high level of awareness of campaigns on the prevention of improper disposal of solid waste. This must be why Adebambo and Dairo (2009) stated that the mass media is effective in creating awareness about public health and environmental issues. It is either that the fact that the campaigners used Igbo language to pass their messages across is responsible for the residents' high awareness of the campaigns or because of the times the campaigns were aired each day or because of the number of weeks or months the campaigns were aired or because of other reasons. Whichever one it is, the high awareness level of Onitsha and Awka residents of the selected campaigns, is a boost for Anambra State and one that will make future sensitization of Onitsha and Awka residents relatively easy for the Federal and Anambra State Governments. It means that the residents cannot be said to be ignorant of what are expected of them to do by the campaigners to keep their environment clean.

In terms of their level of compliance with campaigns on the prevention of improper disposal of solid waste, the researcher found that Onitsha residents' level of compliance is low while that of Awka residents is very low. The case of Onitsha residents, according to Mr Amaechi Akora, the former Managing Director of

Anambra Waste Management Authority as reported by Premium Times (2021), can be attributed to the fact that the commercial city of Onitsha generates huge tons of waste daily. On the other hand, Awka residents' level of compliance is similar to the finding of Nnatu (2018) who found that there is improper disposal of solid waste in Awka and that wastes are often indiscriminately dumped on open plots of land particularly along the streets in Awka. This finding on Onitsha and Awka residents' level of compliance is one that gives credence to the saying that awareness does not always lead to compliance. Top among the reasons for the low and very low levels of compliance, is the inadequate provision of solid waste disposal equipments. Other reasons are either lack of trust on the Government, the high rate of poverty in the country, deliberate decision of the residents to act in a lawless way, imitation of the wrong things, inadequate personnel for solid waste collection who are under the employ of the State Government or other reasons. Whether this finding is as a result of the first reason or last reason or any other reason, the low and very low levels of compliance among Onitsha and Awka residents, respectively, is something that should worry well-meaning residents of Anambra State and a call for adequate measures to be taken by Anambra State Government to significantly increase the level of compliance with the selected campaigns among the residents of the two areas especially since doing nothing to increase their level of compliance could lead to people contracting some communicable diseases and some avoidable deaths which will not be good for our dear State.

On the extent the campaigns make Onitsha and Awka residents dispose of their solid waste properly, finally, the researcher found that the campaigns make Onitsha residents dispose of their solid waste properly to a low extent while it makes Awka residents dispose theirs to a very low extent. This must be why Stephen (2022) stated that the unguided and indiscriminate dumping of solid wastes and other environmental pollutions in the urban cities, like Awka and Onitsha as well as clashes between the people and the environmental protection agencies, are common features of the Nigerian environment. If the campaigns are not the reason why the residents do not dispose of their solid waste properly, it can be said to the residents' perception of the media that were used for the campaigns, their belief in their own ways of disposing solid waste or other factors. Whatever is/are the reason(s), we all want a clean and working Anambra State but all hands must be on deck for us to achieve it.

Conclusion

Television and radio are Onitsha and Awka residents' mediums of exposure to the selected campaigns, respectively. They are highly aware of the selected campaigns but their level of compliance with the campaigns and the extent the selected campaigns make them dispose of their solid waste properly, are not high.

Recommendations

Based on the findings of this study, the researcher recommends thus:

1. Anambra State Government should continue with its campaigns on the prevention of improper disposal of solid waste and work to gain the trust of residents of the State.
2. Anambra State Government should employ adequate waste collectors and make adequate provisions that will help them do their job effectively.
3. Residents of the State should always welcome messages that promote cleanliness and comply with them.
4. Residents of Anambra State should always dispose of the solid wastes they generate properly so as not to endanger their own lives and health and those of others.
5. All hands should be on deck for us to achieve a clean and working Anambra State.

REFERENCES

Agbanu, V.N. (2013). *Mass communication: Introduction, techniques, issues.* Enugu: Rhyce Kerex Publishers.

Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. *In* J. Kuhi & J. Beckmann (Eds.), *Action control: From cognition to behaviour*. Heidelberg: Springer, (pp. 11ó39).

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour.* Englewood Cliffs, NJ: Prentice Hall.

Banjo, A.D., Adebambo, A.A.R., & Dairo, O.S. (2009). Inhabitants' perception on domestic waste disposal in Ijebu Ode, Southwest Nigeria. *African journal of basic & applied sciences,* 1 (3-4), pp. 62-66.

Champion, V.L., & Skinner, C.S. (2008). The health belief model. In K. Glanz, B.K. Rimer, & K. Viswanath (Eds), *Health behaviour and health education: Theory, research and practice,* Jossey-Bass, pp. 45-65.

Christopher, I.C., & Udoh, E. (2020). The determinants of survey design in a research undertaking. *International Journal of Recent Research in Commerce Economics and Management,* 7 (1), pp. 29-37.

Dalmas, M., & Ngahu, S. (2018). Influence of financial risk management on empowerment of women in Nakuru East Sub-County. *International Journal of Business Management and Economic Review,* 1 (6).

Dung, M.D., Mankilik, M., & Ozoji, B.E. (2017). Assessment of college students' knowledge and attitudes toward solid waste management in North Central zone of Nigeria. *Science Education International,* 28 (2).

Ekoro, B.O., Olanrewaju, O.E., Ugbe, U.M., Inyang-Ogim, F.A., & Okoi, F.U. (2021). Market traders' knowledge, attitude, and practices of solid waste disposal in Calabar Municipality, Nigeria: New implications for global health education. *International Journal of Population Studies*, 7 (2), pp. 71-79.

El-Fadel, M., & Maalouf, A. (2019). Challenges of waste management in a developing context: Lessons from Lebanon. doi: 10.4018/978-1-7998-0198-6.ch007 IGI Global.

Emelumadu, O.F., Azubike, O.C., Nnebue, C.C., Azubike, N.F., & Sidney-Nnebue, Q.N. (2016). Practice, pattern and challenges of solid waste management in Onitsha metropolis, Nigeria. *American Journal of Public Health Research,* 4 (1), pp. 16-22.

Enobakhare, J.O., Orem, A.E., & Ogar, G.O. (2013). Assessment of public awareness and knowledge of media campaigns on environmental issues in South-South zone. *European Scientific Journal,* 9 (26).

Hayden, J.A. (2009). *Introduction to health behaviour theory.* Canada: Jones and Barlett Publishers.

Hochbaum, G., Rosenstock, I., & Kegels, S. (1952). *Health belief model.* New York: United States Public Health Services.

Idamah, A.P. (2015). Influence of broadcast media enlightenment campaigns on solid waste management in South-South of Nigeria. *New media and Mass Communication,* 39.

Jeihooni, A.K., Kashfi, S.M., Shokri, A., Kashfi, S.H., & Karimi, S. (2017). Investigating factors associated with FOBT screening for colorectal cancer based on the components of health belief model and social support. *Asian Pacific Journal of Cancer Prevention,* 18 (8), pp. 2163-76.

Kaoje, A.U., Sabir, A.A., Yusuf, S., Jimoh, A.O., & Raji, M.O. (2017). Residents' perception of solid waste disposal practices in Sokoto, Northwest, Nigeria. *African Journal of Environmental Science and Technology,* 11 (2), pp. 94-102.

Karsauliya, S. (2013). Application of remote sensing and GIS in solid waste management: A case study of surroundings of River Yamuna, India. *International Journal of Environmental Engineering and Management,* 4 (6), pp. 593-604.

Kaza, S., Yao, L.C., Bhada-Tata, P., VanWoerden, F. (2018). *What a waste 2.0: A global snapshot of solid waste management to 2050: Urban development.* Washington DC: World Bank.

LaMorte, W.W. (2018). *The theory of planned behavior*. Retrieved on April 30, 2023 from http://sphweb.bumc.bu.edu/otlt/MPHModules/SB/BehavioralChangeTheories/BehavioralChangeTheories3.html

Lang, K. & Lang, G.E. (1959). *Politics and television.* Chicago: Quadrant Books.

Maiman, L.A., & Becker, M.H. (1974). The health belief model: Origins and correlates in psychological theory. *Health Education Behaviour,* 2 (4), pp. 336-53.

McCombs, M.E., & Shaw, D.L. (1972). The agenda-setting function of the mass media. *Public Opinion Quarterly,* 36, pp. 176 -187.

Mokuolu, O.A., Coker, A.O., & Sridhar, M.K.C. (2016). Contributions of solid wastes disposal practice to malaria prevalence in Ilorin, Nigeria. *Nigerian Journal of Technological Development,* 13 (1).

Nabegu, B.A. (2010). An analysis of municipal solid waste in Kano metropolis, Nigeria. *Journal of Human Ecology*, 31 (2), pp. 111-119.

National Population Commission (2006). *National Population Census: National Population Commission.* Abuja: NPC Publication.

Nnatu, S.O. (2018). Health implications of ineffective solid waste disposal for urban residents: A study of Awka town, Anambra state. *International Journal of Health and Social Inquiry*, 4 (1).

Nnubia, U.E. (2014). Waste management strategies for proper household hygiene in Orumba-South Local Government Area of Anambra state, Nigeria. *Academic Journal of Interdisciplinary Studies*, 3 (7).

Obianeri, I. (2022). *Refuse dumps take over Anambra roads, residents fear epidemic breakout.* Retrieved on January 19, 2023 from https://www.google.com/amp/s/punchng.com/refuse-dumps-take-over-anambra-roads-residents-fear-epidemic-breakout/%3famp

Okafor, G.O. (2014). The influence of media ownership and control on media agenda setting in Nigeria. *International Journal of Humanities, Social Sciences and Education,* 1 (7), pp. 36-45.

Okoye, F.O., Onyali, L., & Ezeugbor, C. (2015). Students' waste disposal: A disciplinary problem in tertiary institutions. *International Journal of Education and Research,* 3 (10).

Opaluwa, H., & Ibrahim, S.I. (2022). An assessment of solid waste management system in Lokoja metropolis. *Sapientia Foundation Journal of Education, Sciences and Gender Studies (SFJESGS),* 4 (3), pp. pp. 173-186.

Pálsdóttir, A. (2008). Information behaviour, health self-efficacy beliefs and health behaviour in Icelanders' everyday life. *Information Research: An International Electronic Journal,* 13 (1), pp. 54-71.

Premium Times. (2021). *Anambra spends N1.5 billion annually on solid waste management- Official.* Retrieved on January 19, 2023 from https://www.premiumtimesng.com/regional/ssouth-east/441910-anambra-spends-n1-5-billion-annually-on-solid-waste-management-official.html

Protess, L.D., & McCombs, M.E. (1991). *Agenda setting: Readings on media, public opinion and policy making.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Quine, L., & Rubin, R. (1997). Attitude, subjective norm, and perceived behavioral control as predictors of women's intentions to take hormone replacement therapy. *British Journal of Health Psychology*, 2 (3), pp. 199-216.

Singh, J., Laurenti, R., Sinha, R., & Frostell, B. (2014). Progress and challenges to the global waste management system. *Waste Management & Research,* 32 (9), pp. 800-812.

Stephen, A.E. (2022). Solid wastes management and business patronage in Nigeria: A study of selected organisations in Anambra state. *International Journal of Business Systems and Economics,* 13 (7), pp. 37-60.

Ukala, D.C., Akaun, I.H.I., & Owamah (2020). A review of solid waste management practice in Nigeria. *NIPES Journal of Science and Technology Research*, 2 (3), pp. 169-174.

UNICEF (2006). Solid and liquid waste management in rural areas. *A Technical Note*, 2006.