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Nuisance, trash, tool, and treasure? A closer look at the cultural interpretation and uses of household solid waste: implications on waste management

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Studies have delved into household members' perceptions toward the generation of household solid waste (HSW). However, there remains a crucial gap in the literature regarding the cultural interpretation of waste as an underlying factor influencing these perceptions. Based on the premise that people's culture influences their activities, one of the practical ways to understand the factors that shape people's relationship with their HSW is to uncover the hidden complex web of cultural interpretations, beliefs, and values. Therefore, this exploratory study sought to investigate people's subjective cultural interpretations of the interplay between their way of life and household solid waste (HSW) generation. The purposive sampling method was utilized to select three indigenous quarters, namely Irewo, Ilode, and Ilare, in Ile-Ife, the cradle of Yoruba culture and civilization. From each of the selected quarters, a convenience sampling method was utilized to select 10 participants. Therefore, an aggregate of 30 participants formed the sample size for the face-to-face in-depth interview as the data collection method. Thematic and content analyses were adopted for the data analysis. The study found that there were several cultural interpretations of HSW among the Yoruba residents of Ile-Ife. These interpretations ranged from viewing the waste as a symbol of affluence, poverty, and social status; a symbol of culture lag; a tool to indicate disobedience and to inflict on other people; a tool for sanction; and as among the materials to build spirits' abodes. The study concluded that culture (beliefs, norms, values, customs, and symbols) had influenced HSW generation in the study location with the implication that the diversity of cultural interpretations and meanings attached to HSW necessitates a culturally sensitive approach to solid waste management.

KEYWORDS

subjective cultural interpretations, household solid waste, cultural elements, SDGs, urban culture

Introduction

The public health philosophical stance prioritizes disease-preventive measures over curative intervention. To promote the public health philosophical stance, international bodies such as the World Health Organization, in collaboration with the authorities of many nations in Africa including Nigeria, has intensified efforts to effectively manage waste (Fakunle and Ajani, 2021; Wahab, 2015; World Health Organization, 2023). These efforts are evident in the provision

of facilities for proper care of the waste and the creation of various specialized agencies, such as the Waste Management Agency, to enforce laws on disposal of the waste in the country. These efforts constituted one of the ways to promote public health and to promote policies to discourage indiscriminate disposal of household solid waste HSW and contribute to attainment of Sustainable Development Goals (SDGs), 3, 6, 15, and 17. However, the deficiency of these efforts is evident in the awful state of the waste, which is not in tandem with the expected outcome in the cities of the country (Fakunle et al., 2022). The consequences of this deficiency are vividly illustrated by the most recent World Health Organization report, which highlighted the alarming statistic that Nigeria accounted for a staggering 31% of global malaria deaths in 2023 (World Health Organization, 2023). Therefore, the deficiency has been a matter of academic concern that lends credence to a number of studies that focus on poor management of HSW.

Inappropriate disposal of HSW such as the wooden, cotton, glass, polythene, metal, aluminum and earthen materials such as nylon, metal scrap, plastic bottles, paper, shattered glasses, old clothes and rags is a common practice among Nigerians (Ajani and Fakunle, 2021a). This has contributed to Nigeria's environmental and health problems such as environmental degradation and drainage blocking (Roberts and Okodudu, 2017). For instance, indiscriminate disposal of plastic bottles and polythene materials contribute to harboring dangerous pathogens, pests, rats, mosquitoes, and microbes, that can cause communicable disease outbreaks (Fakunle et al., 2022). In the face of the current high rate of poverty in Nigeria, the aftermaths of the diseases associated with the indiscriminate disposal of HSW threaten the victims' economic lives and living standards, as the few resources available are spent on disease-curative drugs. This situation contradicts the public health philosophical stance that prioritizes preventive measures over curative intervention.

Numerous studies have identified inadequate engagement of individuals in efficient HSW management practices in Nigeria, highlighting significant challenges in promoting sustainable waste handling and disposal behaviors (Ajani and Fakunle, 2021c; Muoghalu and Fakunle, 2021; Rigasa et al., 2016; Wahab, 2015). Moreover, studies with an interest in the socioeconomic effects and potential technological solutions to managing the growing burden of HSW in the country predominate in the literature (Chow et al., 2017; Oyake-Ombis et al., 2015). While existing studies on household waste from consumer goods have extensively investigated household members' perception of handling of solid waste materials such as nylon, plastic, iron, paper, wooden, and aluminum (Anirban et al., 2024; Anokye et al., 2024; Eshete et al., 2023; Noufal et al., 2020; Wang et al., 2021), they have largely overlooked the role of cultural elements as a potential underlying factor influencing these perceptions. As solid waste management practices, which begins with generation, vary across cultures HSW management (Assuah, 2023; Kountouris, 2022; Mintz et al., 2019), this oversight represents an opportunity for further study to delve into the ways in which cultural elements such as values, beliefs, and norms impact household waste generation practices. Moreover, conducting studies on the roles of cultural factors on HSW generation among household members is imperative as a precursor to identify culturally-specific strategies for promoting environmentally-responsible waste management

practices, including zero waste generation, proper disposal of waste, among others. Therefore, the current study adopts a philosophical stance rooted in cultural relativism, which posits that people's cultural interpretation is an underlying factor that shapes their perception of phenomena.

Cultural interpretation transcends linguistic translation; it is an intricate process that encompasses the understanding and analysis of the values that a practice or material has among a certain set of people and the people's beliefs, attitudes, behaviors, and traditions concerning the practice or material (Fakunle and Opadere, 2023). Cultural interpretation involves deciphering the diverse ways in which different cultures make sense of the world and themselves (Taczowska and Borkowski, 2023). In essence, cultural interpretation seeks to engage with and comprehend the meaning and significance of cultural expressions and practices within the wider cultural context. The Yoruba indigenous culture is characterized by a rich tapestry of cultural elements, including values, beliefs, customs, norms, traditions, and practices, which collectively serve as a symbolic and ethical means of transmitting knowledge, values, and principles across generations (Ajani and Fakunle, 2021a). Among these cultural elements are messages that underscore the interdependence between people and the environment, emphasizing the importance of maintaining a sustainable relationship with the physical environment (Fakunle et al., 2022).

Based on the premise that culture influences human activities and shapes societal norms, one of the practical ways to promote behavioral change aligned with public health principles is to encourage culturally-sensitive, environmentally-friendly practices, such as sustainable HSW management. This study hinges on the postulation that people's cultural interpretations of household waste significantly influence waste handling and disposal practices. Moreover, it is postulated that cultural interpretations may also influence people's preferences for the types of HSW they generate and the disposal practices they adopt.

In Ile-Ife, a prominent Yoruba city, which is the cradle of Yoruba civilization and culture in southwestern Nigeria, the Yoruba eco-philosophical, metaphysical, and ontological stance about the sustainability of human habitation is firmly anchored in the idea that a Supreme Being known as Olodumare created everything, including the physical environment of humans. According to this stance, man, as the keeper of the created environment, bears the responsibility of caring for it. However, indiscriminate disposal of HSW, in particular nylon and plastic bottles, is evident in the city. Therefore, the current study sought to investigate cultural interpretations of HSW in the city due to its prominent status in Yoruba tradition as the cradle of Yoruba culture and civilization. In addition to the evidence of indiscriminate disposal of HSW in Ile-Ife, as the origin point for Yoruba culture, the current study considered the city to be an ideal Yoruba city culturally and thus an ideal location for the study.

Theoretical framework

Social constructionism is a theoretical framework that examines social phenomena within their cultural and historical

contexts, focusing on the subjective interpretations and interactions of individuals within a given society. Proponents of social constructionism, such as Berger and Luckmann (Steve and Steven, 2006), argued that human experiences are shaped by social processes, including communication, cultural norms, and historical factors. As a variant of phenomenology, social constructionism emphasizes the importance of understanding individual experiences and behavior as socially and culturally constructed, rather than as objective and universal. By emphasizing the role of history, culture, and subjective interpretation, social constructionism provides a framework for understanding how social phenomena, such as waste management practices, are shaped by the cultural, historical, and social context in which they arise (Steve and Steven, 2006). This approach to understanding social phenomena acknowledges the dynamic and fluid nature of human interactions, suggesting that the meanings and practices associated with various social activities, including waste management, are constantly evolving and being renegotiated in response to changing social, cultural, and historical contexts.

Within the framework of social constructionism, the theory posits that the manner in which individuals engage in household solid waste generation and disposal is contingent upon the interpretations ascribed to waste within their cultural milieu. Therefore, social constructionism implies that the generation and disposal of household solid waste by individuals is influenced by the historical, social, and cultural contexts that inform their understanding and interpretation of the waste. This proposition underscores the pivotal role of culture in shaping individuals' behavior and attitudes toward waste management. The social constructions of waste, which are subject to cultural factors, thus serve as the basis for the creation and perpetuation of waste-related practices within a given community. Hence, the cultural interpretations of household solid waste in the Yoruba society, informed by their social and historical context, are crucial in understanding their waste management practices and their relationship with the natural environment. The dynamic nature of these interpretations highlights the necessity of studying waste management practices within their socio-cultural context to develop effective strategies for sustainable waste management in contemporary Yoruba communities. Drawing upon the theoretical insights of social constructionism, the current study posits that Yoruba cultural interpretations of household solid waste serve as fundamental factors influencing the way Yoruba people manage and dispose of their waste. With this assumption, the current study aims to investigate the cultural interpretations of household solid waste within Ile-Ife, a city of great historical and cultural significance for the Yoruba people, with the objective of gaining a deeper understanding of their waste management practices.

Methods

The study was exploratory in nature as it had an in-depth exploration of Ile-Ife residents' subjective interpretations of the interplay between their general way of life and household solid waste generation and disposal. The study location was Ile-Ife in Osun State, Nigeria. The city is popularly regarded as the cradle of Yoruba civilization and culture as the history of the

Yorubas and their culture are traceable to Ile-Ife city; therefore, the city remains an important center of Yoruba traditions, values and customs (Elujoba, 2012). According to the latest estimates from the World Population Review (2025), the population size of the city is projected to be 438,074 by 2025, reflecting the ongoing growth of this urban center. The study location, in various proportions, accommodates telecommunication services, industries, commercial activities, a large amount of entertainment and relaxation including densely populated residential areas. The location is renowned for music, parties or ceremonies lifestyle all of which constitute the urban lifestyle of the residents. The study location, the Yoruba spiritual seat, is regarded as the home of deities and people and this partly accounts for the numerous festivals that frequently take place in the city (Elujoba, 2012). Also, social events and ceremonies such as naming, birthday, marriage and burial and a series of festivals all of which traditionally require meal are among the lifestyles. Moreover, influx of immigrants, increase in population of the city lend credence to proliferation of departmental stores, fast-food restaurants, electronics centers, shopping malls, supermarkets and large market centers where items packaged in materials that do not easily decompose such as cellophane, glass and plastic are sold (Fakunle et al., 2022).

The ancient city had several indigenous quarters for easy and efficient administration. Purposive sampling method was utilized to select three indigenous quarters, namely Irewo, Ilode, and Ilare, of the study location. From each of the selected quarters, convenience sampling method was utilized to select 10 participants. Therefore, an aggregate of 30 participants formed the sample size for the face-to-face in-depth interview as the data collection method with an interview guide as the research instrument. Each study participant was a Yoruba, preferably female, adult resident of each selected quarters for at least a period of 20 years, whose age range was 60 years and above. People who were not interested in participating in the study were not included. The interview was conducted in the environment that was conducive for the study participants. Also, the responses from the interview were recorded via an audio device. Notes were taken to describe the study participants' facial expressions and actions as they were responding, to supplement the vital information recorded via the audio device, where this was useful. The researcher was the facilitator and was asking questions; there was a field assistant that was trained as the note taker.

Each interview lasted for an average of 30 min, beginning with the introduction of the researcher as well as the study purpose and ending with appreciation from the researcher. The data collection lasted for 2 months. The analysis of the gathered primary data was in stages. Foremost, numbers were assigned to each recorded interview and discussion for proper identification and easy retrieval. The recorded data, including the verbatim quotations and facial expressions that accompany the response, that were obtained from the field were manually transcribed. This process required reading and listening to the tape recorded data repeatedly. This process was made possible by hiring a native of the study location who specialized in translating from English to Yoruba. The specialist also taught Yoruba as a course of study for nearly 20 years after receiving his first degree in the language from a reputable higher institution of learning. Then, the transcribed data were edited to correct mistakes and remove errors that were not amendable to avoid data manipulation. In addition, content

analysis was used for the data. Responses that were obtained in the interviews and discussion were manually coded and categorized according to their similarities, after which appropriate themes, related patterns, and categories were manually sorted out.

Findings

(a) Socio-economic features of the study participants

Thirty informants from three indigenous quarters, namely Ilode, Ireemo and Ilare of the ancient city of Ile-Ife, participated in the study. The general information about the informants indicated that the majority (22) of them were women, while only eight of them were men. The gender-based selection of the study participants was based on the widely held belief that women are in charge of household waste management among the Yoruba ethnic group. All the study informants were married, while one of them was a widow. The age range of the informants in years was 60–85. While the age range of nine informants was between 60 and 64, seven participants had an age range between 65 and 69. Also, the ages of six informants were between 70 and 74, while four informants' age ranges were between 75 and 79 as well as 80 and 84, respectively. Data on the informants' educational levels indicated that the majority (13) of study participants had completed secondary school education. Among the study participants, nine had tertiary education. Tertiary education in the current study included postgraduate, first degree, higher national diploma, ordinary national diploma, and Nigerian certificate in education, respectively.

The number of participants without formal education was 4, while two participants had incomplete secondary school education. These particular participants completed only junior secondary school education. Also, two participants had only primary education. As of the time the study was carried out, data on the informants' occupations indicated that the majority (17) of them were self-employed, 10 of them were the public sector's active workers, and two participants were the private sector workers. One participant was a retiree from the public sector. The range of the informants' average monthly income in Nigerian Naira was 15,000 Naira to 74,000 Naira. Some of the informants' sources of monthly income included remittances from their offspring, pensions, and proceeds of the consultation of the deities and oracles, as well as other private economic activities. The average monthly income of 15 informants ranged from 45,000 Naira to 54,000 Naira, while six informants had an income range between 55,000 Naira and 64,000 Naira. Also, three informants' average monthly income ranged from 15,000 Naira to 24,000 Naira and from 25,000 Naira to 34,000 Naira, respectively, while only one informant's income range was between 35,000 Naira and 44,000 Naira. The three major types of religion in Nigeria, namely, Christianity, Islam, and Indigenous Traditional Religion, are reflected in the study location. Some of the informants expressed that they practiced more than one religion; however, the main religion each of them was publicly identified with was presented in the study. While 14 of the study informants preferred being identified with Islam, 11 participants were Christians, and only five of the informants preferred

TABLE 1 Socio-economic status of the study informants.

Socio-economic status	Frequency	Percentage
Sex distribution		
Female	22	73.3
Male	8	26.7
Total	30	100.0
Age-group distribution		
60–64 years	9	30.0
65–69 years	7	23.4
70–74 years	6	20.0
75–79 years	4	13.3
80–84 years	4	13.3
Total	30	100.0
Highest level of educational status		
No formal education	4	13.3
Primary incomplete	0	0.0
Primary completed	2	6.7
Secondary incomplete	2	6.7
Secondary completed	13	43.3
Post-secondary	9	30.0
Total	30	100.0
Current occupation distribution		
Self-employed	17	56.7
Public sector	10	33.3
Private sector	2	6.7
Retiree	1	3.3
Total	30	100
Average monthly income (N)		
15,000–24,000	3	10.0
25,000–34,000	3	10.0
35,000–44,000	1	3.3
45,000–54,000	15	50.0
55,000–64,000	6	20.0
65,000–74,000	2	6.7
Total	30	100.0
Religion		
Christianity	11	36.6
Islam	14	46.7
Traditional religion	5	16.7
Total	30	100.0

Author's field survey (2024).

being identified as African Traditional Practitioners, popularly known as *Oni-Ise* or *Onise*. One of these two informants was a priest widely known as *Babalawos* in Yorubaland. The study participants' socio-economic characteristics are presented in Table 1.

(b) Cultural interpretations of HSW

The current study investigated the meanings or interpretations of household solid waste by the study participants from their cultural binocular views. The investigation was to depict the links between these interpretations and the adopted practices to dispose of the waste at the study location. The interpretations, in line with the study data, are thematically presented in this subsection.

Household solid waste as a symbol of affluence and poverty

The current study found that the residents' economic status was among the factors that largely influenced the generation of certain kinds of household solid waste in the study location. This situation is applicable to the solid waste generated from the purchase and consumption of items from popular modern eateries such as Captain Cook, Mr. Biggs, Tantalizer, and a host of others with branded packaging for their products. The study data further indicated that purchasing from these places gives buyers a feeling of affluence. Even people with less purchasing power love visiting these places to get this special feeling and treatment once in a while. This finding suggested the residents' belief that buying items with branded packaging or from classy, popular vendors, coupled with the waste generated from the consumption of such items, is a symbol of affluence. This finding indicated that the financial prowess of an individual determined the kind of items such an individual purchased; therefore, the waste generated tended to differ in size and type. However, edible or food items can be bought just at any place by the roadside or in the market, but not all vendors have branded packaging items. The study data further indicated that people with greater purchasing power often preferred new items packaged in cartons, paper bags, nylon, and other sorts of packaging materials, while the price of such items prevented people with lesser purchasing power from buying them.

The study data also indicated that the high prices of items packaged with solid materials also give a feeling of affluence to individuals, as high prices connote affluence and low prices connote poverty. Packaging materials such as transparent and branded nylon bags, cartons, disposable plates, or bottles were also elements that exhibited the symbol of affluence and gave a feeling of affluence to the individual buyer. Therefore, this feeling accounted for the need to showcase the packaging materials of their purchases to experience the feeling of affluence. This finding suggested that in communities where residents are of upper economic status, the quantity and type of waste generated differ from those generated in communities of people with lower economic status. This finding suggested that the type, price, quantity, and packaging of the purchased items, coupled with the waste generated from such items, were among the indices often used to depict people's economic class. In the same vein, the study data indicated that branded or packaged items give a make-believe feeling to customers, as well as the place of purchase. For people with low purchasing power to get this feeling, they also go there to catch the aura of being rich and would

also want to fill their waste bin with these branded package items as a way to pass a message to their neighbors about their current economic status. This finding is reflected in the extract below.

I see buying items that are beautifully packaged in solid materials, such as nylon of different colours and designs, as a sign of being rich. Items, especially food, bought in eateries such as Captain Cook, Mr. Biggs, and some other modern eateries are packaged in solid materials. I am always happy to buy items in such places because it shows that I have just made some money. At least once a while, to enjoy myself, I patronise these places. Because only the rich, I believe, patronise these places to buy items. After consuming the food in the package, I throw the material used for packaging away, and my neighbours know that levels pass levels. (woman, 65-year-old)

Another participant explained that

When you see the waste, such as packages for beverages like Bournvital, Milo, milk, and 5-Alive, always coming from the house of some people, you would have known that those people are rich (smile). (woman, 69-year-old)

The study data indicated that the participants accepted that the need to feel like being affluent was among the factors that triggered the preference for soft drinks that are packaged in disposable plastic bottles over drinks in returnable glass bottles. This preference is important when conducting ceremonies such as naming, marriage, housewarming, and burial, among others. In the same vein, the belief that disposable plastic bottle soft drinks grace occasions better than drinks in returnable glass bottles and the idea that the celebrant is capable and affluent contributed to the preference. As of the time the study data were garnered, a 50-cl disposable plastic bottle of Coca-Cola, a popular soft drink in the study location, was 250 Nigerian Naira, while a 50-cl returnable glass bottle of the drink was 170 Nigerian Naira. The study data indicated that one of the reasons for purchasing packaged items was the ease of handling, as people preferred buying drinks in disposable plastic bottles to replaceable glass bottles. The need for extra care in handling the disposable plastic bottles and their easy portability were among the reasons cited. However, the study data indicated that this form of advancement in product packaging has increased the rate of household plastic waste generation and disposal. This preference could be suggested to account for the proliferation of soft drink plastic bottles that are indiscriminately discarded in the study location. The extract below reflects these findings.

I prefer buying soft drinks in plastic bottles to those in glass for several reasons, such as being portable, less fragile and easily disposable after consuming the content, and to indicate that God has blessed me. Only when I desire any of the soft drinks, such as Coke, Fanta, etc., and I don't have enough money to buy the ones in plastic bottles do I opt for the ones in glass, and I have already accepted that I must be very careful with the glass as it must be returned to the seller. (woman, 69-year-old)

Another participant added that

I prefer serving people soft drinks in disposable plastic bottles to drinks in glass when conducting ceremonies because placing the drinks in plastic bottles makes the meal table setting beautiful, and there won't be any need to look for the bottles after the ceremony... (woman, 60-year-old)

In another light, the extract above indicated that some kinds of solid waste, in particular branded plastic bottles, symbolize being affluent in the study location. This finding is also applicable to the situation where household solid waste consists of repairable gadgets or items but is rather discarded as the disposer of such waste prefers buying new ones to repairing the old ones. However, this attitude or lifestyle is interpreted in Yoruba culture as being wasteful or a squander. The current study found that the satisfaction people derived from the feeling of being affluent by discarding the repairable gadgets, coupled with the changing nature of contemporary society that often tilts from agrarian life to a lifestyle that conforms to urbanization and the incessant advancement of technology, presents some kinds of household waste, such as electronic gadgets, leaking pots, and faulty umbrellas, among others, as a symbol of affluence. In the same vein, repairing these items connotes a symbol of poverty. The extract below reflects this result.

I am blessed beyond repairing some of the old gadgets I have at home. Besides, there are now new and modernised products; hence, repairing the old ones is just like praying for poverty for myself. Only people who could not afford to buy the new products would want to repair such gadgets when they were faulty. (woman, 69-year-old)

Household solid waste as means of making friendship and earning respect

The study data indicated that the era when household solid waste was completely regarded as useless is gradually fizzling out, and the concept of waste is now viewed from a different perspective. The study found that some kinds of household solid waste became elements to make and maintain friendship. The study data indicated that used clothes, cartons, plastic bottles, old kitchen wares, pots, metal objects, and papers that were considered waste items in the past are now considered a source of making and maintaining friendship by those who are in possession of them. In most cases, when these items were given out free of charge, the giver had a sort of esteemed value in the eyes of the recipient. This practice often commands some social recognition for the giver. The extract below portrays this finding.

Yoruba culture values gifting as one of the ways to improve people's way of life. People like those who give, therefore, I give out some materials I consider waste to people I think might need them. For instance, I give out some waste, such as soft drink plastic bottles, to a woman who uses them to package some goods, such as palm oil and groundnut oil, she sells, and to another woman who sells herbal concoctions for fever and

pile. I believe I have contributed to their livelihood. As a result of the giving, I earn respect from these women; they always greet me smiling, and I'm happy for that. (man, 61-year-old)

The study data established that the command for respect that people earned as a result of their giving out certain kinds of household solid waste to those that might still consider them useful made them socially relevant in their community. The data indicated that the giving is not usually once-off but rather often, and possessors of those items often felt important or relevant as they contributed profitably to other people's lives. Also, contributing to the life's endeavor of another member of the community through this practice often enhances the giver's social worth and increases the giver's popularity within the community. The current study's finding established that an item is considered waste only when it has no value to its present user or holder. However, when the same item gets into the hands of another person who still observes any value in it, such an item is no longer a waste, and this situation suggests that the initial owner of the waste could give it out as a resource to gain influence or earn respect. A female study participant cited a typical example of this situation where heaps of papers generated by her children in primary and secondary schools, which she considered waste, were presented as a gift to a roadside bean-cake vendor that was in need of papers. The participant expressed that the vendor held her in high esteem, and the giver earned a sort of social worth from the vendor. The extract below portrays this finding.

Instead of throwing out some waste, such as papers that my grandchildren used in their respective schools, I usually give them to a woman who sells akara (bean cake) in the street where I live. Therefore, anytime the woman sees any of my grandchildren, she gives them akara, probably to appreciate my giving. Even though I don't have the intention of collecting anything in return for the papers I give her, I appreciate her for the love she shows to my grandchildren; at least that is another way to ensure a cordial relationship between us. (woman, 68-year-old)

Household solid waste as a symbol of culture lag

Generating household solid waste is not limited to any particular group of people, generation, race, or culture. The types of waste generated differ from one epoch, group of people, or generation to the next. The study data indicated that there are specific types of household solid waste that indicate that household members maintain conventional ways of life. In the study location, the study data indicated that the waste from cooking items such as mud pots, firewood, and leaves for food serving, among others, which are easily biodegradable, is now replaced with the waste from cooking items such as cooking gas, aluminum pots, modern packaging materials like fancy breakable plates and nylons, plastic spoons, and processed fast foods, which are not easily decomposed. This outcome portrayed the acceptance of modern technological products among the residents of the study location. Therefore, the kind of waste that a household generated indicated such a household's rate of acceptance of modern products. The study found that household solid waste could be a symbol of cultural

lag, as the data indicated that people viewed households that stuck to conventional practices as being backward or lagging behind in cultural developments. In other words, the households that generated kinds of solid waste, such as leaves from packaging, were viewed as having yet to catch up with the modern period. Therefore, to be viewed as trendy or in vogue and to showcase the level of exposure, people opted for modern products, and this preference was detectable from the kind of waste their household generated.

In addition, this study found that the constant pressure to appear modern and be portrayed as someone who lives in the west substantially influenced the choices of Ile-Ife residents when selecting from the available household native and local materials. This outcome suggested that the impact of globalization is coupled with a significant alteration in food packaging items, which in turn results in a change in the kind of household solid waste generated. For instance, the importation of the idea of bottling drinks in plastic bottles, packaging food on plastic fancy plates, nylon sachets of water, and different sorts of cellophane for packaging has altered the kind of solid waste that households generate in the study location. The extract below reflects the findings above.

We are in the twenty-first century, and things have changed; therefore, to show that one also blends with the current things, the old ways of doing things need to be jettisoned. Of course, there was a time when we used to use banana leaves and other types of leaves to package food. In fact, I could remember vividly that rice was mostly packed in leaves, but now this has changed. Many food vendors that are current with modern ways to package food now use disposables such as nylon and plastic materials to replace the leaves. I personally prefer buying food made of these kinds of materials to food packed with leaves, to show that I blend with the current practice. Even though some people still practice packaging food in leaves, this practice shows that people are yet to blend with the current practice. (woman, 77-year-old)

In spite of the significant alterations in household materials, the study, however, found several reasons for the persistent existence of several Yoruba conventional ways of life among the households in the study location. A typical example of this situation was the use of leaves for food packaging, such as local rice, popularly known as *ofada* rice, and *olele*, or *oole*, also known as *moin-moin*, a boiled or steamed bean pudding made from granulated peeled beans. Adding flavor and a special delicacy to the food was cited as the main reason for cooking and packaging these dishes with a specific kind of leaf. The extract below reflects this finding.

Truly, things, including food packaging, have changed and been modernized. However, I still prefer packaging such meals as *olele*, *moin-moin*, and *ofada* rice in leaves when I am cooking them. People now use nylon. I have tasted the one packaged in nylon and leaves individually. I discovered that the one in the leaves is more delicious than the one in the nylon. Only when I am unable to get the needed type of leaves do I resort to using nylon. (woman, 75-year-old)

Household solid waste as a tool to indicate disobedience and to inflict other people

The study data indicated that the cultural interpretation of household waste among Yoruba people connotes negativity; waste is given such names as *egbin*, *panti*, or sometimes regarded as *idoti* or *aimo* in Yoruba language. The study established that the Yoruba residents of the study location regarded household solid waste as unwanted materials or residues that were expected to be discarded at dumpsites. The study data indicated the belief of the study participants that dumpsites were expected to be far away from residential areas, usually at the back of the house or behind the city. The participants expressed that the dumpsites were the destinations for all debris, including household solid waste; hence, a particular location turned into a dumpsite was regarded as a despising place. Household solid waste contributed to all the perceptions people have toward the dumpsites; therefore, indiscriminate disposal of household solid waste was termed a symbol of disobedience and wickedness.

A common expression among the Yoruba residents of the study location is that *aatan kii ko ilekile* simply means that the dumpsite does not reject any form of debris. This saying has connotations. From one perspective, the saying depicts the kind of interpretation given to the dumpsite. The study established that the contempt that residents of the study location expressed toward the dumpsites made sighting them gory. Therefore, indiscriminate dumping of household solid waste, in particular on other people's land in the study location, is regarded as offensive, as Yoruba cultural values are out of tune with such a practice. The perpetrators of such a practice are regarded as offenders and disobedient to the dictates of Yoruba culture. Despite the reality that everyone generates waste in one form or another holds, the participants considered indiscriminate dumping of household solid waste as an act of wickedness and disobedience, in particular in the situation where the land is personal property. The interpretation the landowner gives for such a practice is wickedness. Moreover, the study found that people in the study location viewed the sight of dumping household solid waste on such landed property as a symbol of abandonment for the property, retrogression, backwardness, and all sorts of ill-fated destiny for the owner of such landed property as a result of the idea that dumpsites were the abode of all sorts of debris. Therefore, the landowner whose property was despised and degraded into a dumpsite felt offended about such a practice. One of the participants expressed displeasure with dumping household solid waste on his property. The extract below reflects this finding.

... in spite of government warnings that people should take proper care of their waste, people still disobey by their act of household waste indiscriminate disposal. ... Let me take my case as an instance: when the building of my house was ongoing, all because I was unable to complete it in time as a result of the financial challenge I had then, could you believe people just turned my building site into a dumpsite? This act, to me, is a sign of wickedness, and their household waste was used as a tool. (man, 72-year-old)

Moreover, the study data indicated that in the developing sites of the study location, the practice of dumping waste in

uncompleted buildings is common. According to the study data, residents of such communities as well as those from faraway places usually look for unfenced and bushy, uncompleted buildings to dispose of their household solid waste. In addition, the current study established that, in most instances, this practice usually took place before the day broke or late at night. The timing of this practice suggested that the perpetrators understood the requirements of Yoruba culture concerning waste disposal practices and that the culture is not in support of this practice. Therefore, the perpetrators have a sense of wrongness about their act, and that explained the reason the perpetrators chose the night for such a practice. This timing is in line with a common saying in Yoruba that “*Oru laa se’ka*,” which literally means “acts of wickedness take place at night.” The extract below reflects this finding.

...I don’t know why people would choose to dump the household solid waste here (referring to the site of the uncompleted building). The funny thing is that the perpetrators usually come here to dump their waste here when it’s dark. Definitely the perpetrators know what they are doing is bad. (woman, 80-year-old)

In response to the practice of dumping waste on other people’s land and as a means of preventing such a practice, the researcher’s observations in the study location indicated that landowners put inscriptions on the wall or on a small sign board in front of their properties with words to deter people from such a practice. A number of these inscriptions were either warnings or curses and were mostly written in Yoruba. Curses were the common inscriptions. Yoruba people understand the dire consequences of curses. The inscriptions suggested that when people read them, the intending perpetrators would refrain from using the location as a dumpsite, even if they had been using the location in the past. Examples of such inscriptions were “*da ile s’ibi ki o s’ofo t’omo-t’omo*,” which could be translated as “dump refuse here and perish with your children,” and “*ma se da ile s’ibi ti o ko ba fe gbe omo re sin*,” which could also be translated as “do not dump refuse here if you do not want to bury your child.” A more lenient inscription could just be “*ma se da ile s’ibi*,” which could be simply translated as “do not dump refuse here”. However, the study could not ascertain the effectiveness of these inscriptions as of the time the data were collected.

In the same vein, the study established that household solid waste could be a tool to inflict harm on other people. This finding is applicable in a situation where people dispose of their household solid waste in the rain without thinking of the harm the waste might cause to other people in other places where the waste is deposited. The study data indicated that the residents of the study location were fond of waiting for rain to fall to dispose of their already-gathered household solid waste into the flowing water. It was unknown to them that the refuse in the flowing water would eventually stop flowing with the water when it got to a particular place. Then, the waste creates a new problem for residents of that area.

The study data indicated that residents of communities with bad drainage systems suffer from the practice of individuals dumping household solid waste in drainage from far distances,

as these communities become the bus stop for the waste flowing from other places. The aftermath of this practice includes forming barriers to the flow of water, water stagnancy, which results in stench, and the harboring of mosquitoes and other pathogens. The residents that are the recipients of the ill act believe that perpetrators of indiscriminate household solid waste disposal are selfish and wicked and do not think about the consequences of their actions on other people. Therefore, the recipient communities interpret such a practice as wickedness, where household solid waste serves as the tool. The situation is presented in the extract below.

Whenever it rains, the flood conveys household solid waste into our street, and the whole street becomes dirty. I believe people throw the waste in the drainages or pack the waste in the water channel for the flood to carry it away when it rains. In our street, where the water channels are not properly constructed, the waste hangs and makes the environment dirty. People who throw the waste in the drainages do not realise that they are inflicting us here where the drainage is bad. Even though the perpetrators might not realise the consequence of this act, especially when they are not affected, the truth is that the perpetrators use their household solid waste to punish us here. (man, 73-year-old)

Household solid waste as a tool for sanction

Sanctions, punishment, and corrections are among the popular practices in Yoruba culture. These practices still constitute potent tools among Yoruba people. These practices are meant to ensure the prevention and correction of crimes. Punishment in traditional Yoruba society included fines, flogging, castration, banishment, and execution; imprisonment; tying with yokes and shackles; stoning; death; and turning the landed properties of the offender to a dumpsite to erase the trace of such an offender in the concerned community. According to the study data, with contemptuous regard for waste, traditional Yoruba communities made use of household solid waste as a punitive capital weapon for capital crimes. Offenders in this category are ejected or banished from the community and their homes or landed properties are turned into dumpsites. Yoruba people developed the concept of “*pakodile*” whose nomenclature was formed from the practice “*pa oko di ile*” which literally means “turning someone’s landed property to a dumpsite”.

The study data indicated that crimes such as robbery, desecration of the holy places at the shrines, disrespect to the kings, and treason to the community usually attracted capital punishments, such as *pakodile*, several centuries ago in the study location. Based on the popular belief in Yoruba culture that there is nothing attractive about waste or refuse, *pakodile* communicated disapproval or displeasure toward the offender, while other members of the community were expected to desist from whatever wrong was perpetrated by the offender. With the communal lifestyle of traditional Yoruba society, the practice of *pakodile* indicated that the offender would not only bring punishment to himself but also implicate other family members.

In the same vein, the concept of pakodile is in conformity with a common Yoruba saying that “*Bi ara ile eni ba n je kokoro mo obi, bi a ko ba so fun, here-huru re ko ni je ka sun l’oru*,” which literally means failure to warn one’s erring household member brings dire consequences upon the whole neighborhood. The practice of *Pakodile* was premised on the belief that when a member of the family was erring, the responsibility of other family members was to warn him so that they would not bear the dire consequences together. The extract below reflects this outcome.

There were many ways to punish any offender in the past. These punishments included flogging and banishing, and one of them was a pakodile. In the past, farm waste, such as weeds, as well as household waste, was dumped by the whole community on the property of erring members of the community. This practice was popularly known as pa-oko-dile in the Yoruba language. This act showed that the whole community was against something that the erring member had done. When pakodile occurred, the whole household bore the brunt. Now, there are law enforcement agencies that the government has provided. Therefore, the idea of pakodile is no longer common, as there are now law enforcement agencies to arrest and punish offenders. (woman, 80-year-old)

From the extract above, turning a person’s residence or property into a dumpsite was a means of punishment for a member of the community who erred or disobeyed a particular law or custom of the land. However, the data indicated that a significant alteration has occurred to the punishments meted out to the offenders concerning the practice of *pakodile* in the contemporary period. There are now modern agencies concerned with the enforcement of law and order in a state or the entire country. Hence, a community no longer solely decides how to punish an offender, as the government now has the jurisdiction to make those decisions.

Household solid waste as a material to build spirits’ abode

The study found that, as a result of not being easily decomposed, household solid waste such as nylon and plastic material could be interpreted to be among the suitable materials by depositing them at dumpsites to build the abode of some kinds of unseen forces and spirits. This interpretation is suggested to encourage the people who found the spirits useful to generate suitable waste to build the abode for the spirits. The extract below reflects this finding.

Some Aljanu (jinxes) find the dumpsites a suitable abode for them. Household solid waste that lasts a long time is among the basic components of aatan; therefore, the waste could be viewed as a material to build the spirits’ abode. These spirits are also useful for the people that run errands for, in most instances, to do evil or take revenge. (man, 72-year-old, African Traditional Practitioner)

Discussion of findings

This study finds that an individual’s financial prowess is a determinant factor in the kind of items they purchase, leading to household waste varying in size, type, and quantity, aligning with previous findings by [Suthar and Singh \(2015\)](#). Furthermore, the study’s results reveal that the quantity and type of waste generated in communities with upper-economic status residents differ from those in lower-economic communities, corroborating the reports by [Suthar and Singh \(2015\)](#). The study’s findings indicate that packaging materials act as symbols of affluence, conferring a feeling of affluence to the buyer, which contributes to their need to showcase these materials to experience this feeling, a finding that aligns with [Kinyua et al.’s \(2016\)](#) research in Kenya. Additionally, both [Kinyua et al. \(2016\)](#) and the present study underscore the importance of branding, packaging, and point-of-purchase experiences in crafting a sense of make-believe affluence among customers. The present study’s results concur with [Fakunle et al.’s \(2022\)](#) findings that a desire for an affluent image underpins the preference for soft drinks in disposable plastic bottles over returnable glass bottles. The current study’s findings are in line with [Fakunle et al.’s \(2022\)](#) discovery that a desire to appear affluent is a contributing factor to the preference for soft drinks in disposable plastic bottles over returnable glass bottles. A unique aspect of the present study revealed that people perceive various household items such as leaves, earthen pots, mortars, pestles, and grinding stones as symbols of cultural lag, with households that continue using these items considered backward or lagging behind in cultural developments. Hence, the solid waste generated from these items reflects unwillingness to embrace modernity.

The study’s finding that ease of handling was a factor in people’s preference for disposable plastic bottles over replaceable glass bottles for purchasing packaged drinks aligns with previous reports by [Chow et al. \(2017\)](#) in Asia and [Oyake-Ombis et al. \(2015\)](#) in East Africa. This study’s findings about increased plastic waste generation due to the preference for plastic packaging and the desire for affluence by discarding repairable gadgets also align with existing reports by [Chow et al. \(2017\)](#) on changing societal attitudes that favor convenience and disposability over repair and sustainability. This study’s findings about increased plastic waste generation due to the preference for plastic packaging and the desire for affluence by discarding repairable gadgets also align with existing reports by [Wahab \(2015\)](#) that urbanization and technological advancement have led to proliferation of specific household waste types like faulty electronic gadgets, leaking pots, and broken umbrellas, which have become symbols of affluence in contemporary society. Likewise, the reports by [Wahab \(2015\)](#) indicating that urbanization and technological advancement have increased the prevalence of certain household waste items such as faulty electronic gadgets, leaking pots, and faulty umbrellas, which have become symbols of affluence in contemporary society, are consistent with this study’s findings. Moreover, repairing these items is perceived as a symbol of poverty.

In line with [Song et al.’s \(2015\)](#) findings and this study’s results, the perception of household solid waste as entirely useless is diminishing, and the concept of waste is now viewed differently as some waste items have become a means of gaining respect

and influence. This study uniquely found that items previously considered waste, such as used clothes, cartons, plastic bottles, old kitchen wares, pots, metal objects, and papers, are no longer simply waste but a source of respect for the giver and the recipient. In agreement with Taczowska and Borkowski's (2023) findings, this study uncovered the malleable nature of waste, where an item becomes waste when it loses value to its initial owner, yet ceases to be waste when someone else perceives it as valuable. This highlights the potential for solid waste reuse or recycling, a process that can be viewed through the lens of environmental sustainability.

Studies have shown that generating household solid waste is not limited to a specific group, generation, or culture (Fakunle, 2024; Wang et al., 2021). However, the types of waste generated vary over time, across groups, and between generations. Consistent with these existing studies, the current study established that specific types of household solid waste were generated in the study location, reflecting that household members maintain traditional ways of life. This waste includes cooking items such as mud pots, firewood, and leaves for food serving. However, the current study also noted that these traditional items have been replaced by modern alternatives like cooking gas, aluminum pots, modern packaging materials like fancy breakable plates and nylons, plastic spoons, and processed fast foods, which are less easily decomposed. This outcome, in agreement with Ajani and Fakunle (2021b), reflects the increasing acceptance of modern technological products in the contemporary period. Furthermore, in accordance with Kinyua et al. (2016), the types of waste generated by a household indicate its rate of acceptance of modern products. The current study found that the pressure to appear modern and emulate Western lifestyles significantly influenced the choices of Ile-Ife residents when selecting from traditional and modern household materials. This result agrees with Fakunle et al. (2022, 2023), who reported that globalization has caused substantial changes in food packaging, resulting in a shift in the types of household solid waste generated. For instance, the importation of the idea of bottling drinks in plastic bottles, using plastic fancy plates and nylon sachets for food packaging, and different types of cellophane for packaging has altered the types of solid waste generated by households in Ile-Ife.

The current study's unique finding revealed that, despite significant changes in household items, Yoruba residents of Ile-Ife still cling to their traditional ways of life. This persistence was observed due to factors such as the unique flavor and delicacy obtained from using local materials like leaves for cooking and packaging dishes. Additionally, Yoruba cultural interpretations of household waste connote negativity, as reported by Kinyua et al. (2016) in Kenya and Rigasa et al. (2016) in Nigeria. Similar to Song et al. (2015) in Macau, Yoruba residents frown upon indiscriminate dumping of household waste, viewing it as offensive and contrary to their cultural values. Offenders who dump waste on others' land are considered disobedient to Yoruba culture, aligning with Eshete et al. (2023) who regarded indiscriminate disposal of waste as unlawful.

One of the unique findings of the current study was that household solid waste can be weaponized against other people by disposing of it in the rain, leading to potential blockages, water stagnation, foul smells, and the harboring of mosquitoes and pathogens. The current study also reported the unique practice of using household waste as a form of capital punishment, turning the offender's property into a dumpsite. Moreover, the study found

that household solid waste can be perceived as a material for constructing metaphysical abodes for unseen beings by dumping the waste at dumpsites. This study found that rituals for healing from incessant headaches often necessitated their performance on dumpsites or the use of dumpsite soil, which points to the need for the preservation of such locations as dumping grounds. This, in turn, creates a demand for the generation of waste beyond the inevitability of its occurrence in daily life, as this is imperative to the preservation of dumpsites, or "aatan" in Yoruba culture (Ajani and Fakunle, 2021a).

The study revealed that cultural ceremonies such as those common among the Yoruba, known for lavish meals served in disposable containers, often result in increased waste generation, as confirmed by Fakunle et al. (2022). This finding aligns with the belief that hosting elaborate parties to display wealth is prevalent in Ile-Ife, consistent with findings reported by Oyake-Ombis et al. (2015). Also, Resolute (2024) further corroborate the existence of lavish celebrations to flaunt one's economic status beyond the current study's location. In addition to the distribution of items, the preference for drinks and meals served in non-biodegradable packaging further exacerbates the waste generation problem. The higher the extravagance of a ceremony, the greater the quantity of waste it generates. As corroborated by Suthar and Singh (2015), the current study confirmed a direct correlation between household size and solid waste generated, with larger families producing more waste. This finding adds to the existing body of literature that solidifies the relationship between family size and waste generation, with the cultural value attached to large families acting as a subtle yet significant contributor to waste production in the study area.

Conclusion

The study concluded that there were several cultural interpretations of household solid waste among the Yoruba residents of Ile-Ife. These interpretations ranged from viewing the waste as a symbol of affluence or poverty, a symbol of culture lag, a tool to indicate disobedience and to inflict other people, a tool for sanction, and as among the materials to build spirits' abodes. Also, the study concluded that culture (beliefs, norms, values, customs, and symbols) had influenced household solid waste generation among Yoruba residents of Ile-Ife. These influences were observable in the links between cultural practice, norms, values and household solid waste generation; maintenance of norms, social status and household solid waste generation; and the belief that poverty and affluence link to the quantities of household solid waste generated. Other influences included the belief that the practice of household solid waste reduction is a symbol of poverty; the belief that household solid waste reduction is unattainable in certain conditions; as well as belief in top-bottom decision-making in household solid waste generation. The findings of this study have several implications for household solid waste management practices. Firstly, the diversity of cultural interpretations and meanings attached to household solid waste necessitates a culturally sensitive approach to solid waste management. Programs designed to address household solid waste issues should be aware of these differences and tailor their strategies to align with local beliefs and practices. Secondly, social norms, values, and

beliefs play a significant role in household solid waste generation. Customizing solid waste management strategies to reflect these factors can potentially increase compliance and acceptance among community members.

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#), further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by the Ethical Committee of the Sociology and Social Work Department Redeemer's University, Ede, Nigeria. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

SF: Data curation, Formal analysis, Investigation, Methodology, Supervision, Writing – original draft, Writing – review & editing.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frsus.2025.1571497/full#supplementary-material>

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