

## **Effectiveness of Plateau Environmental Protection and Sanitation Agency's Communication Strategies in Curbing Open Defecation Practice Among Residents of Jos North, Plateau State**

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### **Abstract**

Open defecation practice, which is as old as the existence of humans, remains an international challenge, with developing nations, which Nigeria falls into the worse hit. Available data review that 2.4 billion people globally do not have access to basic sanitation facilities such as toilets or latrines. Various communication strategies have been adopted by state, national and international organizations to curb this menace. Therefore, the study assessed the effectiveness of Plateau Environmental Protection and Sanitation Agency's (PEPSA) communication strategies in addressing open defecation practice in Jos North Local Government Area, Plateau State. The study was guided by the Persuasive Communication Theory. This theory finds relevance in this study due to the fact that PEPSA has been using various communication strategies to persuade the people of Jos metropolis for them to be aware of the health issues associated with open defecation and the need for the people to stop this act. Mixed research methods were used; data were collected through in-depth interview and questionnaire. Finding revealed that PEPSA employed various communication strategies such as town hall meetings with stakeholders, engagement of town criers, community theatre, use of traditional and religious worship centres, and use of billboards, pasting of information on walls, and other strategic locations and use of banners. Others are the use of conventional mass media like television, radio, newspapers, magazines; use of social media such as Facebook, WhatsApp, X, Instagram, YouTube, TikTok; and distribution of leaflets, flyers, pamphlets otherwise known as information education communication materials. The study however found that the communication strategies have not been very effective due to certain challenges such as people's attitude and lack of sustainability of the communication strategies by PEPSA and poor monitoring mechanisms. The study, thus, recommended among others that PEPSA should increase the knowledge of the people through increased use of various communication strategies to defeat the held belief practice of open defecation.

**Keywords:** Communication strategies, Health, Environmental protection, Open defecation & Sanitation

### **Introduction**

Statistics by the World Health Organization [WHO](2024) reveal that more than 2.4 billion people across the world engage in open defecation practice. This practice, according to WHO is more pronounced in developing countries due to lack of toilet facilities, ignorance and poor sanitary education. Available statistics from Afghanistan reveal that more than 4.2 million of the country's population practice open defecation (United Nations Children Emergency Fund [UNICEF], 2022). The situation is not different from that of India, as data released by WHO and UNICEF in 2021 shows that 15% of its citizens lack modern toilet facilities, hence they defecate in the open.

Furthermore, the Pan American Health Organization and WHO (2019) published reports, which indicate that open defecation practice remains a disturbing phenomenon in Latin America and the Caribbean nations. Data from these organizations reveals that 82.7 million persons living in these territories lack access safe-managed water and sanitation services and about 15.5 million of them accounting for 18.8% practice open defecation.

Similar statistics are found in African countries like Uganda, Senegal, Kenya, Rwanda, Lesotho, Cameroun etc. For example, reports by Rakotomanana *et al* (2020) and Nafula (2023) reveal that 14.6 million Ugandans still engage in open defecation. A report by the World Bank in 2017 shows that 24.1% of Senegal's rural population were practicing open defecation. In 2020, the figure stood at 11.25% (World Bank, 2020). In 2018, statistics of those practicing open defecation in the country was 12.48%, in 2016 it was 13.73%, while in 2014, the data revealed a total of 15.01% of Senegalese involved in open defecation (World Bank, 2023). Open defecation practice is still rampant in Nigeria. Babalola (2019) contends that Nigeria is one of the countries of the world with the highest number of people practicing open defecation with an estimated 47 million people doing it.

Plateau State, according to a report by Sahara Reporters (2021) is the second with the highest number of people practicing open defecation after Kwara State. This negative report has attracted the attention of the Plateau Environmental Protection and Sanitation Agency (PEPSA) as observation has shown that PEPSA has come up with various communication campaign strategies to deal with this menace. The goal of persuasive communication is to alter the normal practice of people to a refined and globally accepted practice. The ability to engage effectively with communities involved in open defecation practice is also made possible through well-crafted communication. This is known as behaviour change communication. This facilitates meaningful dialogue among various stakeholders, including religious and community leaders, educators, parents and community members. Such engagement is vital for gaining insights into diverse perspectives and involving these stakeholders in the collaborative development of viable solutions that is achieved through well-thought out communication. Additionally, communication plays a pivotal role in resource mobilization. Well-articulated communication strategies attract support from donors and agencies willing to contribute to the improvement of facilities that will curb open defecation. Furthermore, the deeply rooted cultural and religious aspects of open defecation practice necessitate communication strategies that are sensitive to these traditions.

PEPSA has designed various communication strategies to educate and enlighten people on the need to avoid defecating in the open. PEPSA believes that through persuasive communication ending open defecation in Jos North Local Government Area and by extension Plateau State as a whole is possible. But the effectiveness and the challenges of these communication strategies need interrogation.

Studies on communication strategies and curbing the menace of open defecation abound (Abdullahi, Sarkingobir & Yabo, 2023, Abebe & Tucho, 2020, Okon & Ikpi, 2019, Bealy *et al*, 2022; Adinlewa & Olubodede, 2021; Bwakan, 2021; Alom, Ogah & Dogo, 2020; Melea, 2023; Kakade, 2015; Oluwalanu *et al.*, 2022; Alhassan, 2019; Coffey *et al.*, 2014). Nevertheless, there seems to be no studies on the effectiveness of communication strategies adopted by PEPSA in eradicating open defecation in Jos, Plateau State recently. This creates a gap in the literature which the current study seeks to fill.

## **Objectives of the Study**

The main objective of this study is to assess effectiveness of Plateau Environmental Protection and Sanitation Agency's communication strategies in curbing open defecation practice among residents of Jos North, Plateau State. The specific objectives are to:

- i. Examine the communication strategies adopted by PEPSA in addressing open defecation in Jos North Local Government Area.
- ii. Explore the extent of the use of communication strategies by PEPSA in addressing open defecation in Jos North Local Government Area.
- iii. Examine the effectiveness of the communication campaign strategies adopted in sustaining open defecation-free communities by PEPSA in Jos North Local Government Area.
- iv. Investigate the challenges affecting the assimilating of PEPSA's communication strategies concerning anti-open defecation menace among the respondents.

## **Conceptual Clarifications**

### **Communication Strategies**

Communication strategies refer to the careful packaging of information by a change agent with a view to influencing who the communication is directed to so that such a person can think and act in accordance with the intention of the change agent. These strategies are fundamental in articulating, explaining and promoting a vision and a set of well-defined goals. Kibe (2014) maintains that they build a reliable, cohesive "voice" that links varied activities and goals in a manner that appeals to an organization's stakeholder. Sackey (2014) opines that communication strategies also determine the nature of relationships and collaboration created with the most important constituents of the organization such as investors who are critical in the successful implementation of the programme. According to Skinner and Rampersad (2014) communication strategy is a well-orchestrated set of actions to achieve specific objectives through the execution of a blend of communication methods, techniques and approaches. Tarone (1980) as cited by Huang (2010) iterates that communication strategies are used to close the gap between the knowledge of the targeted party and that of the sender in real communication situations in order to avoid communication disruptions (Huang, 2010). Anjuwon and Okiyi (2018) corroborates that in social development strategies, communication techniques such as town hall meetings, market square meetings, community engagements, radio jingles and talk shows, flyers, posters, handbills, traditional rulers, churches, schools, age groups, women associations, family heads, field visits, film shows, drama, face-to-face meetings and others are used. A strategic communication is deliberate and the emphasis is on designing appropriate messages, processes and outcomes of message delivery (Rhee, 2008).

### **Open Defecation**

Open defecation is defined as the disposal of human faeces in open areas, such as fields, forests, road side, beaches, and open bodies of water (Iyorza, 2015). Open defecation as the human practice of defecating outside, rather than into a toilet. People may choose fields, bushes, forests, ditches, streets, canals or other open space for defecation (Jones, Fisher & Reed, 2012; Boschi-Pinto, Lanata & Black, 2009). They do so because either they do not have a toilet readily accessible or due to traditional cultural practices. Similarly, Clasen et al (2014) cited in Oluwalanu *et al* (2022) define open defecation as the act of passing excreta in exposed locations instead of in covered locations. The act has to do with people preferring to relieve themselves in bushes, streams and other convenient places rather than using modern toilet facilities (WHO & UNICEF, 2013).

## **Behaviour Change Communication**

A behaviour change communication campaign can be defined as a systematic approach that employs a range of integrated strategies to convey messages aimed at informing, influencing, and persuading target audiences regarding the adoption or maintenance of healthy behaviours (Kauppi 2015). These messages can be disseminated through a variety of communication channels, including television, radio, newspapers, the internet, social media, brochures, posters, workshops, community forums, and personal interactions. According to Crawford and Okigbo (2014), one effective method for promoting public health is the implementation of communication campaigns that educate and inform the community about healthy habits and proper healthcare practices. Newson et al. (2013) indicate that a significant portion of health issues encountered by individuals is preventable, with behaviour change communication serving as the key solution.

## **Review of Empirical Studies**

Alom, Ogah and Dogo (2020) evaluated public awareness and understanding of anti-open defecation campaign methods in Benue State through the use of the survey research design. The investigation was supported by The Situation Awareness Theory. Finding of the study indicated that the people of Benue had adequate knowledge of open defecation campaign messages by the Benue Government. The study identified the most used communication techniques to include leaflets, posters, and signboards (50 percent). While the use of opinion leaders, town criers, and health experts' word-of-mouth campaigns as well as radio, television, and newspaper ads (21 percent). The lowest rated medium was social media/blogging (6 percent). According to the findings, community compliance is extremely excellent but not exceptional.

Similarly, Okon and Ikpi (2019) conducted a survey on the efficacy of communication methods in dealing with open defecation in Ugep Community in Cross River State. The study utilized the Stages of Change Model to further deepen the understanding of the research. Finding of the investigation showed that as a result of the various communication methods used to educate and enlighten members of the studied community, some of them saw the need to shun open defecation, leading to them having modern toilet facilities. However, few people in the community still engage in open defecation practice despite their exposure to education materials. The study recommended that continuous communication campaign should be used to sensitize the public on the need to stop open defecation; while volunteer health communicators should sensitize children on the dangers of open defecation since the study showed that many of them still engage in this act.

Additionally, Owusu's (2021) study focused on the use of communication to tame the challenges of open defecation. The study was conducted in La Dade-Kotopon Municipality in Ghana. The researcher collected data from respondents through the qualitative research method. Social behaviour change theory, social practice theory and diffusion of innovation theory were utilized. Findings showed that communication strategies were employed by the Ghanaian authorities to educate and enlighten people in La Dade-Kotopon Municipality against the menace of open defecation. However, the communication methods have not been effective due to certain factors such as culture, inadequate funding, illiteracy, increase in population, lack of toilet facilities, among others. The study thus advocated, among others, that for the communication efforts to be successful, the government should inject more monies to enable relevant agencies carry out campaign against open defecation effectively.

Nwokolo and Nwokolo (2021) used survey design to study the application of social networking platforms and mobile phones to address open defecation in South-East Nigeria. Findings of the study indicated that social media platforms have become significant in sensitizing and educating

the people against open defecation practice. The study suggested that relevant government ministries, departments and agencies should continue to take advantage of social media communication tools to reach out to many communities that are still engaged in open defecation. The focus of Sanusi *et al's* (2022) study was on the utilization of communication methods to tame open defecation among rural dwellers in South Western part of Nigeria. The investigation adopted the survey and interviews methods to collect data from respondents. The study found that radio organizations were instrumental in raising the consciousness of the people concerning the harmful effects of open defecation. The study's finding further revealed that Water and Sanitation Department used different interpersonal communication strategies to enlighten the public and promote good hygiene practices. It was concluded that radio was an effective communication channel for public education regarding behaviour change. The researchers suggested continued sensitization against the menace of open defecation by relevant government agencies and non-governmental organizations.

Similarly, Ugwu (2017) employed content analysis research approach to study the use of communication methods to influence rural people's behaviour concerning open defecation. The investigation, which was anchored on the Diffusion of Innovation Theory, found that the application of behaviour change communication methods played key role in curbing open defecation scourge in some communities in Nigeria. The researcher, therefore, advocated for more efforts by local, national, regional, international governments and non-governmental bodies at all levels to deal with this issue.

### **Theoretical Framework**

The study is situated within the purview of the Persuasive Communication Theory. This theory came into existence through Carl Hovland in 1940. Hovland posited that change of behaviour and attitude can be possible through the application of various communication techniques. He proposed that when people are persuaded via the instrument of communication, there is the tendency for them to absorb new ways of doing things that the communicator wants or desires. Persuasion, according to Hovland, aims at making people to see things through the lens of the person using communication to talk to them. In other words, the objective of persuasion is to influence other people's behaviour by changing their philosophy, thinking, principles, character or attitude. This further implies that persuasion, which also implies urging, is a skillful and systematic technique used by an individual or authorized organization to raise people's consciousness and create awareness with a view to influencing or strengthening their held beliefs. In a way, the persuasive communication theory is made up of three distinct phenomena, which are Communication-Attitude-Behaviour.

Aristotle further states that persuasive communication theory deals with three key issues (ethos, pathos and logos), which represent appeals to credibility (ethics), emotions and logic respectively; essentially meaning that to effectively persuade someone, you need to establish your own credibility, connect with their emotions and present logical arguments to support your point. Malin and Kilger (2017) concur that the aim of persuasive communication is to influence someone's beliefs, attitudes or behaviours through the means of carefully and meticulously crafted and disseminated messages

This theory finds relevance in this study due to the fact that PEPSA has been using various communication strategies to persuade the people of Jos metropolis for them to be aware of the health issues associated with open defecation and the need for the people to stop this act. The theory further applies to the stud in the sense that the researcher wanted to know whether the

information the people of Jos metropolis gained from PEPSA has influenced their attitudes about open defecation.

### Methodology

The study utilized a mixed-method design involving qualitative and quantitative methods. The two methods complemented the lapses of each other. The qualitative research approach equally allows participants ample liberty to describe their feelings in their own words and possibly in their local dialect. In summary, the advantage of the use of mixed-method research design is that it allows the generation of adequate and variety of data to achieve the research objectives as well as to draw valid and reliable deductions (Creswell, 2009). Specifically, in-depth interview and questionnaire were utilized as instruments of obtaining data from the respondents.

The population of the study covered the entire residents of Jos North Local Government Area. Jos North LGA has a projected population of 643, 200 in 2024 (National Bureau of Statistics [NBS], 2024). From this population, the researchers used Krejcie and Morgan (1970) table to determine the sample size of 399 for the study. Out of this size of questionnaire administered on 384 while in-depth interview was conducted on 15.

The research utilized the cluster and purposive sampling techniques. Purposive sampling was adopted to select Jos North Local Government Area. The choice of studying this LGA was because it appears to be one of the areas with the highest rate of open defecation.

Survey data were analyzed using descriptive statistical tools. Results were presented through the use of tables, figures, frequencies, and percentages. Mean deviation of five-point Likert Scale, which the criterion mean was put at 3.0 and above was accepted result, while 2.0 and below was rejected result. The qualitative data were analysed using the method proposed by Braun and Clarke (2013) to discover prominent themes and patterns within the interview data. This task entails encoding the material and classifying it into appropriate themes. Data here were contextually analysed.

### Data Presentation and Analysis

A total of 384 copies of questionnaire were administered out of which 356 (93%) were retrieved, and found valid for the analysis. Graphical representation of the response rate is shown in Figure 1.

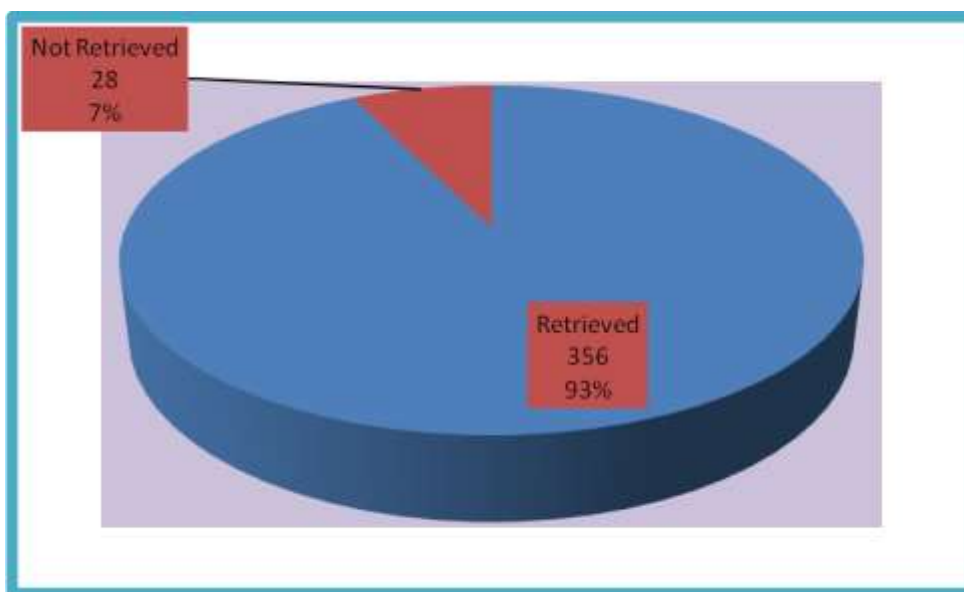


Figure 1: Analysis of Response Rate



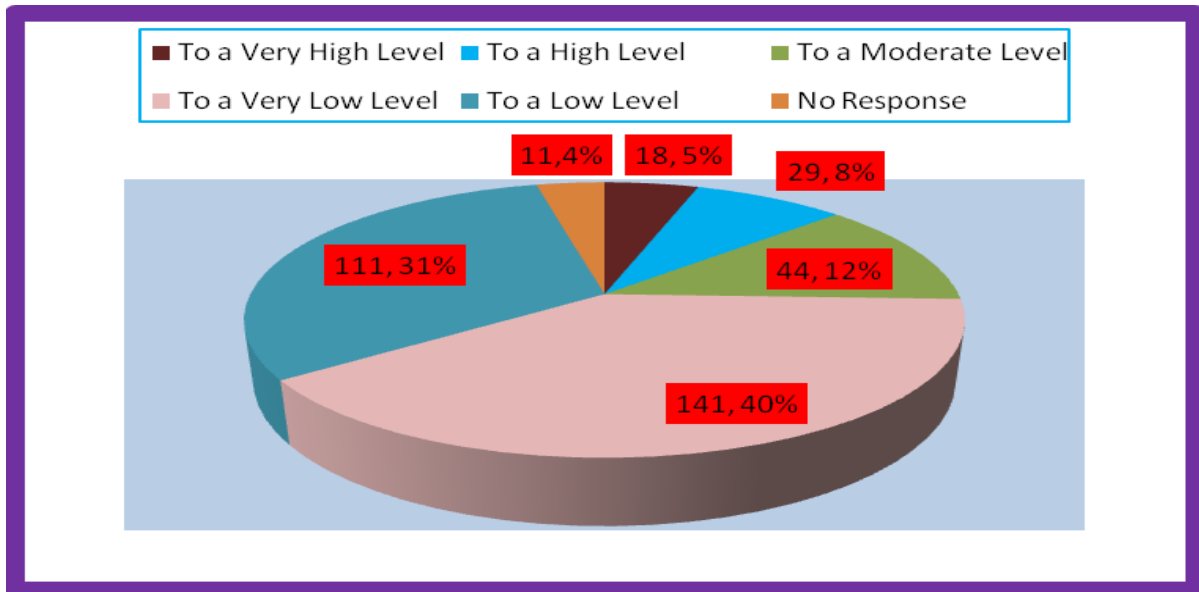
**Table 1: Awareness of Communication Strategies Used by PEPSA in Tackling Open Defecation**

Options	AS	A	U	SD	D	Total	Mean Rating	Decision
Use of conventional mass media like television, radio, newspapers, magazines	139	193	13	8	3	356	4.2	Accepted
Use of social media such as Facebook, WhatsApp, X, Instagram, YouTube, TikTok	121	187	9	18	21	356	4.0	Accepted
Distribution of leaflets, flyers, pamphlets otherwise known as information education communication (IEC) materials	117	181	11	25	22	356	3.9	Accepted
Town hall meetings with stakeholders, engagement of town criers, community theatre, use of traditional and religious worship centres	129	195	6	15	11	356	4.1	Accepted
Use of billboards, pasting of information on walls, and other strategic locations and use of banners	89	208	11	27	21	356	3.9	Accepted

Data in Table 1 signify that PEPSA uses a number of communication strategies and channels with a view to ensuring open defecation free status in Nigerian communities. These strategies include use of flyers, new and traditional media, town hall meetings, workshops and seminars, etc. This is as attested by a significant number of the respondents who either strongly agree or agree. This finding, therefore, infers that the respondents are aware of the communication strategies employed by PEPSA concerning open defecation issues. Furthermore, it suggests that PEPSA recognizes the importance of using various communication methods to deepen behaviour change.

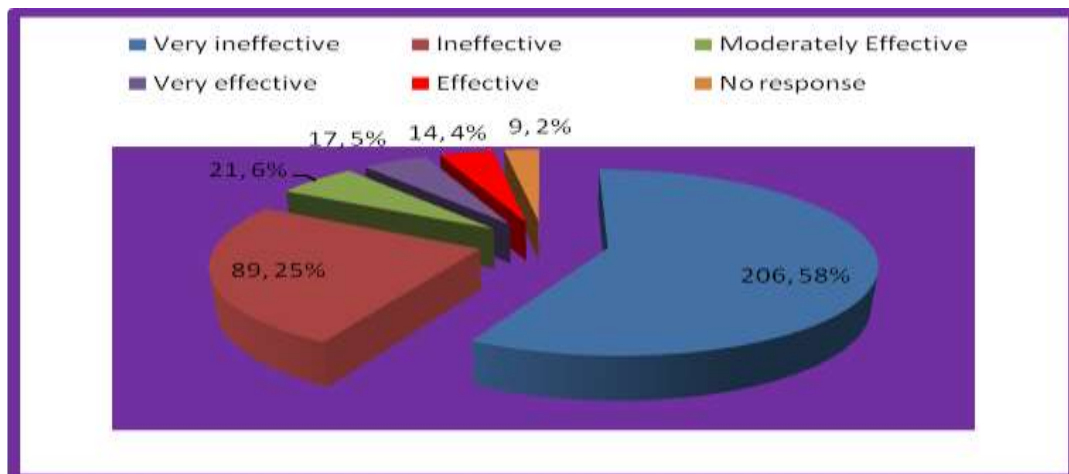
Further, participants were asked questions regarding the communication strategies of PEPSA during the interview session. In addressing this question, the participants exhibited uniformity in their replies. The communication strategies pointed out include: Engagement of town criers, community theatre, use of traditional and religious worship centres; use of billboards and other educational communication materials. For instance, one of the respondents said: “One of the methods that PEPSA used to enlighten us about dangers of open defecation that they came to our community sometimes ago and gave us talk in our primary school”. Another respondent concurred that “PEPSA used radio, our traditional and religious leaders, last time they were here, they shared branded T-shirts and caps and other enlightenment materials containing information regarding leaving in healthy environment”. Further reacting to the question, another respondent submitted that “PEPSA the last time they came, they visited our traditional rulers and also went to churches and talked to us about the hazards associated with defecating in the open”. Another retorted that “I have been a participant of PEPSA hygiene programme, a recipient and a beneficiary of jersey, cap, T-shirt, flyers and posters”.

This finding, therefore, infers that the respondents are aware of the communication strategies employed by PEPSA concerning open defecation issues. Furthermore, it suggests that PEPSA recognizes the importance of using various communication methods to deepen behaviour change.



**Figure 2: Extent of Coming in Contact with PEPSA’s Communication Strategies in Addressing Open Defecation in your Area**

It could be deduced from the result in Figure 2 that PEPSA has not extensively deployed communication to tackle open defecation in the studied areas. Therefore, the assertions by the participants above presuppose that they were not frequently updated with information regarding open defecation from PEPSA. Responding to a similar question during interview, one of interviewees confirmed that “I received and read of PEPSA open defecation messages sometimes once in four or five months.” Another participant affirmed that “Not frequently” but I know that most of their messages urged us to shun practicing open defecation.” One of participants further responded that “Though I got information about them sometimes in 2020, I was able to know the need to see open defecation as a dangerous practice.” Another respondent said that “No, to a low extent, I am aware that the PEPSA was here some years ago and organized workshop, but since then, I have not seen any of their activities again.” Therefore, the assertions by the participants above presuppose that they were not frequently updated with information regarding open defecation from PEPSA.



**Figure 3: Effectiveness of PEPSA’s Communication Strategies in Addressing Open Defecation**



Data in the above Figure indicate that the respondents rate the efficacy of PEPSA's information and education on open defecation as not effective. The implication of this data is that a life-threatening issue such as cholera needs intensive information and education from organizations such as PEPSA so that people living in the area covered by this study can desist from practicing open defecation.

**Table 2: Could any of these be the Challenges of not Adopting and Using PEPSA's Communication Strategies on Open Defecation in your Area?**

Options	SA	A	SD	D	UD	Total	Mean Rating	Decision
Lack of understanding of PEPSA's communication	13	27	18	143	155	356	1.8	Rejected
Held beliefs to traditional methods of defecating	214	88	9	16	29	356	4.2	Accepted
High cost of building modern toilet facilities	237	71	15	13	20	356	4.3	Accepted
Lack of sustainability of the communication strategies b PEPSA, weak monitoring and evaluation mechanism by PEPSA	251	55	6	19	25	356	4.3	Accepted

The data presented in Table 2 suggest that held beliefs, and cost of constructing modern latrines, poor monitoring and lack of sustainability of the communication strategies by PEPSA extensively slowed down the effectiveness PEPSA's communication effort in tackling open defecation practice in Jos North Local Government Area. These limitations underscore the ongoing challenge of attitude of Nigerians to accepting new ways of keeping the environment healthy as well as poor policy and programme implementation.

Many of the interviewees also contributed their voices to this result, expressing their preferences regarding open defecation practices. One participant remarked that "I prefer to go to the bush for defecation, as it is a practice I have been accustomed to since childhood." Another interviewee noted "I also find the bush a better place to defecate, particularly because the pit toilet can often be unpleasantly odorous, leaving one with no alternative but to use the bush."

Additionally, another respondent emphasized the viewpoint that "in this area, certain individuals, regardless of the availability of toilet facilities, still choose to relieve themselves in the bush or any nearby space that they find convenient". One interviewee further supported this claim by stating that;

"You mean to defecate in the stream, bush, river or an available place? Yes, I do that every day. It is preferable to go to the bush when one feels the urge. Defecating in the bush is something that our ancestors followed. It is believed that one is less likely to contract infections when using the bush to defecate compared to utilizing public toilet facilities, which are shared by many. There is no risk of infection from the bush."

Another participant further expressed his opinion that thus:

The primary reason that makes people engage in open defecation practice stem from a lack of awareness concerning its detrimental effects. Despite hearing about the health

and environmental risks associated with defecating in the open via television, radio, reading about it on the pages of newspapers, many individuals remain uninformed. Additionally, the high levels of poverty and ignorance among members of various communities contribute significantly to this negative practice. While some may be aware of the health risks associated with open defecation, they often do not have the financial means to build modern sanitation facilities, leaving them with no option than to resort to defecating in any accessible location.

Another interviewee pointed out that the near absence of education and inadequate dissemination of information regarding open defecation leads many individuals to perceive this practice as acceptable. Another respondent concurred that “Ignorance and insufficient knowledge about the harmful consequences of open defecation are significant factors contributing to its prevalence.” It could therefore be deduced that the communication strategies employed by PEPSA to address open defecation in the studied communities in Jos North Local Government Area have not yet achieved their intended objectives and goals. This shortfall can be attributed to several challenges, including the people’s attitude to lack of sustainability of the communication efforts, ignorance, weak evaluation and monitoring mechanisms by PEPSA, among others.

### **Discussion of Findings**

The findings of the study as showed in Table 1, revealed the communication strategies to include: use of conventional mass media like television, radio, newspapers, magazines; use of social media such as Facebook, Whatsapp, X, Instagram, YouTube, TikTok; and distribution of leaflets, flyers, pamphlets otherwise known as information education communication materials. Others are town hall meetings with stakeholders, engagement of town criers, community theatre, use of traditional and religious worship centres, and use of billboards, pasting of information on walls, and other strategic locations and use of banners. Very important to the findings of the study, further is that respondents were aware of PEPSA’s communication strategies in addressing open defecation in their various communities.

This finding is in line with that of other scholars like Anjuwon and Okiyi (2018) who found that in social development strategies, communication techniques such as town hall meetings, market square meetings, community engagements, radio jingles and talk shows, flyers, posters, handbills, traditional rulers, churches, schools, age groups, women associations, family heads, field visits, film shows, drama, face-to-face meetings and others are used. Rhee (2008) revealed that a strategic communication is deliberate and the emphasis is on designing appropriate messages, processes and outcomes of message delivery, using various means like traditional and religious leaders, gathering people in a place and talking to them, pasting of banners and distribution of flyers and pamphlets, use of traditional and new media.

Analysis of the findings further revealed the extent of communication strategies used by PEPSA in addressing open defecation in Jos North Local Area. Results indicated that the communication strategies have not been frequent. This implies that the practice of open defecation may continue to thrive among members of the studied communities. This finding is in agreement with an earlier study by Melea (2023) who found that *Daily Trust*, *ThisDay* and *Nigerian Tribune* under reported open defecation menace in Nigeria. This finding is however contrary to that of Kakade (2015) who stated that newspapers have been used to deepen open defecation policies and programmes of the Indian government.

The implication of this data is that a life-threatening issue such as cholera needs an intensive information and education from a relevant organization like PEPSA so that people living not only in communities covered by this study can desist from practicing open defecation. This means that there should be a regular sensitization programme using various enlightenment communication strategies to continually raise awareness about the dangers of open defecation. Findings equally showed that PEPSA's communication messages on open defecation have not been satisfactory. The implication of this is that insufficient information and enlightenment about open defecation might lead to continue rise in this practice among the people of the studied area and that cholera and other diseases associated with contamination of the environment and water may continue to affect people in the studied communities. It also implies that open defecation practice is still high among the people. This finding aligns with that of Coffey *et al* (2014) who found that there was high rate in the practice of open defecation in rural communities which remains stubbornly widespread with several dire consequences for human health and the environment alike. The finding is, however, contrary to that of Okon and Ikpi (2019) who found that most of the respondents attended sensitization programmes which led to some community members abandoning the practice of open-defecation; and that many of them have toilets and do not defecate in the open, while about a quarter of the respondents still defecate in the open because they lack information on the dangers of such practice. Also, Ugwu's (2017) study corroborates that social and behaviour change communication (SBCC) play significant roles in addressing the behavioural and attitudinal challenges affecting the eradication of open defecation in Nigeria.

The findings of this research further highlighted some challenges hindering the assimilating of PEPSA's communication strategies concerning anti-open defecation menace. These obstacles include: held beliefs to traditional methods of defecating, high cost of building modern toilet facilities, and weak monitoring and evaluation mechanism by PEPSA. The finding revealed that peoples' attitudes to a great extent influence their indulgence in defecating in open space. This was also reflected in the qualitative data too, with most of the respondents noting how difficult it is to build modern toilet facilities and shun traditional practice of open defecation.

The implications are that these challenges could undermine efforts not only by PEPSA to curb open defecation practices, but also efforts by other similar organisations. These challenges highlight the difficulty of changing peoples' behaviours through the use of communication, especially in an environment where the people are used to old practices.

## **Conclusion**

From the findings of the study, it is concluded that PEPSA employ various communication strategies such as town hall meetings with stakeholders, engagement of town criers, community theatre, use of traditional and religious worship centres, and use of billboards, pasting of information on walls, and other strategic locations and use of banners. Others are the use of conventional mass media like television, radio, newspapers, magazines; use of social media such as Facebook, Whatsapp, X, Instagram, YouTube, TikTok; and distribution of leaflets, flyers, pamphlets otherwise known as information education communication materials. However, these communication strategies have not been very effective due to a number of challenges highlighted in the study.

## **Recommendations**

From the findings of the study, the following recommendations were proffered:

- i. PEPSA should increase the knowledge of the people regarding open defecation through more sensitization programmes and pasting of information regarding the dangers of open

- defecation in strategic locations and use of the mass media like radio, television, newspapers, and social media platforms.
- ii. PEPSA in partnership with various stakeholders, especially those concerned with environmental issues, should increase the involvement of volunteer health and environmental communicators. These individuals can effectively educate communities where open defecation is pronounced about the risk associated with this practice.
  - iii. As a policy recommendation, the Nigerian government should study the policies and programmes of other nations that have used community-based methods to achieve success in open defecation issues. Such policies and programmes that the Nigerian government can take a look at include that of Indian government known as the Clean India Mission (SWACHH Bharat Mission) launched in 2014. The programme's primary objective is to embark on building modern toilet facilities in households and in strategic locations in various communities. The Indian fight against open defecation initiative uses community engagement approaches such as constant town hall meetings, seminars, among others to sensitise the people on the need to avoid open defecation practice.

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