ORIGINAL ARTICLE

The Impact of Broadcast Media in The Promotion of Environmental Health in Jos Metropolis: A Study of "Your Wealth, Your Health" On NTA Jos Network Centre

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Abstract

The study investigated how television programmes are used to promote environmental health in Jos metropolis. Specifically, it investigated amongst others the contents of the programme "Your Wealth, Your Health" on NTA Jos network centre that are relevant in promoting environmental health in Jos metropolis, and the impact of the programme in promoting environmental health in Jos metropolis. The study adopted Social Cognitive Theory as its theoretical framework. Both Quantitative and Qualitative research designs were employed to explore the perception and disposition of 400 respondents randomly sampled in Jos metropolis about the study. Both primary and secondary data instruments were used for data collection. Findings indicated amongst others that contents that call for action, messages with visual contents and contents that are thematic are the contents of the programme that inhabitants of Jos metropolis consider relevant in promoting environmental health in Jos metropolis and the roles of Educator, Communicator and Campaigner are the major roles played by the programme in promoting environmental health in Jos metropolis. The study recommended amongst others that environmental health messages should be aggressively promoted through television programmes such as drama, documentary and news since television has the advantages of sight and sound. Public enlightenment programmes such as "Your Wealth, Your Health" should be strengthened through the media, to achieve any significant impact and prevent further decay of the environment in Jos.

Keywords: Appraisal, Environmental Health, Broadcast Media, Impact

Introduction

The media can be utilized effectively as instruments in environmental communication to increase public knowledge and attention towards environmental concerns with a high degree of efficacy due to its ability for effective communication. It can also be used to sway people's opinions, ideas, and perceptions as well as modify their behaviour or attitudes. According to McQuail (2010, p.92), "the media also cause change whenever they exercise influence." Thus, communication has the power to shape how the general public sees a range of important life concerns.

Citing Warper (1996), Alabi (2010) notes that attitudes and predispositions are at work before and during exposure to mass communication and they in fact largely determine the communication - how we interpret the contents and the effect which mass communication has upon us. In other words, "messages received from the media affect our thoughts and belief formations as well as responses to attitude" (Alabi, 2010, p.220).

The object of the present study, Nigeria Television Authority (NTA) Jos Zonal Network Centre broadcasts programmes provided by the mandates given to it by the Nigeria Television Authority. 'Your Wealth your Health' is one of the health programmes the station broadcasts weekly to create awareness on the environmental health issues in the state.

It is generally acknowledged that human behaviour has played a crucial role in detecting, comprehending, and resolving environmental health issues and will continue to do so. Given the importance that health issues are generally attached to in human society, broadcast media like radio and television are used to disseminate information on health-related issues in order to inform, educate, influence, and change the health behaviours of the public (Utalor, 2019).

Therefore, it can be assumed that environmental behaviour can be influenced by the level of public awareness raised by the broadcast media on environmental issues. The purpose of this study is to determine the extent to which public awareness through the broadcast media has impacted on the

environmental health behaviours of residents of Jos metropolis.

Statement of the Problem

"Broadcasting shall affect society constructively, establishing the agenda for the social, cultural, economic, political, and technological growth of the nation, for the public good," according to the Nigeria Broadcasting Commission's Code (2016, p.8). Broadcast media communication has the power to change the public's perceptions of and attitudes about health-related issues (Akpoghiran, 2015). Despite these claims, the improper disposal of solid waste that emerges from human activities of development and survival continues to be one of the biggest environmental concerns facing emerging countries.

To evaluate the effectiveness of some interventions made, particularly through the broadcast media, to raise awareness about environmental health issues, several health communications studies have been conducted (Utalor, 2019; Akpoghiran, 2015; Auta & Messiah, 2018). These studies demonstrate how the media has a role in raising public awareness of environmental health issues. This researcher, however, was unable to locate any studies that explicitly looked into environmental health issues in the Jos metropolitan.

This obvious gap in research knowledge is what the present study seeks to bridge. Thus, the problem of the present study is, what is the impact of the programme, 'Your Wealth, Your Health' on NTA Jos Network Centre in the promotion of environmental health in Jos metropolis? To provide answers to this question, the study seeks to investigate amongst others, the contents of the programme, the significant impact of the programme and the role of the programme in promoting environmental health in the metropolis.

Research Questions

Three research questions were formulated to guide the study:

1. What are the contents of the programme, "Your Wealth, Your Health" on NTA Jos network centre that inhabitants of Jos metropolis consider relevant in promoting environmental health in Jos metropolis?
2. What is the impact of "Your Wealth, Your Health" on NTA Jos network Centre in promoting environmental health in Jos metropolis?
3. How do the inhabitants of Jos Metropolis perceive the role the programme, "Your Wealth, Your Health" on NTA Jos network centre plays in promoting environmental health in Jos metropolis?

Hypothesis

There is significant impact made by the programme, "Your Wealth, Your Health" on NTA Jos Network Centre in promoting environmental health in Jos metropolis.

Literature Review

There are a number of concepts which need to be identified, examined and put in a proper consideration so that a better understanding of the views of scholars and policy makers on this study would be achieved.

Broadcast Media

The term "broadcasting" evolved from its use as the agricultural method of sowing seeds in a field by casting them broadly about. It was later adopted for describing the widespread distribution of information by printed materials or by telegraph (Electronic Code of Federal Regulation, 2017). According to Iredia (2015), broadcast media refers to that form which uses audio-visual instruments (television and radio) to produce and disseminate content to listeners and viewers. Simply put, over the air broadcasting is usually associated with radio and television, though more recently, both radio and television transmissions have begun to be distributed by cable. This study defines broadcast media as that form of media which uses audio-visual instruments (television and radio) to produce and disseminate content to listeners and viewers in Jos metropolis of Plateau State.

Environmental Health and Issues

The National Environmental Health Association of the US defines environmental health as the science and application of preventing human injury, illness,

and promotion via effective environmental management (NEHA, 2012). According to WHO (2016), Environmental determinants of health - including unsafe water, poor sanitation, air pollution, hazardous chemicals and poisons, occupational hazards and extreme weather - cause more than a quarter of the burden of disease in the Western Pacific Region. The health of people is inextricably linked to the health of the environment, and the environment is changing. Human health and survival on a changing planet are now increasingly threatened by an unpredictable climate and rapidly rising sea levels.

In Nigeria, like in many other countries in Africa, there have been several flooding across the states including Plateau State. This has brought attendant environmental health issues like cholera, malaria, malnutrition and the likes. Bold leadership is therefore required to address the environmental determinants of health in Jos metropolis.

Television Broadcasting and Health Communication

According to the Nigeria Broadcasting Commission Code (NBC) (2016, p.8), "Broadcasting's utilisation of audio and video technology makes it capable of reaching the audience simultaneously, availing mankind with the best means of information dissemination and reception. It also enables the individual to share in and contribute to the best of his ability, to the world around him".

Unlike the radio, television provides its audience the opportunity to view as well as listen to its messages (Chioma, 2014). Viewers can experience the sight of massive flooding, environmental degradation due to bush burning, sight of replaced people and of course sight of patients in hospital wards suffering from environmental health related illnesses through Television. Despite the domineering and expansive role of the Internet, global reports on mass media still find Television as the most popular source of information on health (Burzyńska, Binkowska-Bury & Januszewicz, 2015).

Murphy, Hether and Rideout (2015) indicate which television formats may be a potential source of medical information (news programmes, series, talk-shows, advertising). Accordingly, their studies show that television, next to press and radio, is the medium for health information and may provide the viewer with medical knowledge. Television is a valuable medium for disseminating health information, and all organizations associated to health should work with it. This claim is made by Luth, Jardine, and Bubela's (2013) studies.

According to the U.S. Department of Health and Human Services (HHS), health communication has significantly improved both individual and societal health during the first decade of the twenty-first century. Professionals in public health must continue.

In the *Encyclopaedia of Health Communication*, Thompson (2014, p.25) highlights the importance of health communication to human society, writing that "research that affects how long people live, their level of health during their lifespan, how they cope with health problems, and how communication affects their health brings with it a level of human relevance that is not available in all areas of study." A report by the National Health Alliance (2011, p.12) notes that Health campaigns are very important in "helping rural people to resist disease, prolong life and achieve better mental and physical health". The report suggests that knowledge has to be supported by the will, information and abilities to behave in an environmentally friendly way.

Empirical Review

Akpoghiran (2015) studied "Influence of Broadcast Media Enlightenment Campaigns on Solid Waste Management in South-South of Nigeria". Survey research and content analysis methods were adopted for the study. Results obtained showed amongst others irregular and poor enlightenment campaigns by the broadcast media on solid waste management in all these states and positive attitude towards solid waste management depended regularly on broadcast media enlightenment campaigns.

Utalor (2019) studied the "Influence of Broadcast Media Messages on Awareness, Perception and Attitude of Maternal Health among Reproductive Women in Ilorin". The study found amongst others that women in Ilorin depend mostly

on broadcast media as a major source of information on maternal health but they identified radio as more effective than television in disseminating maternal health messages and women agreed to the statement that broadcast media positively change their attitude towards maternal health.

Nwankwo (2017) carried out a study on "Residents' Assessment of Media Role in Environmental Health Education in Onitsha Urban, Anambra State, Nigeria". The study found that residents considered refuse accumulation as the major environmental health challenge encountered in the area. Respondents also assessed the level of environmental health education or awareness in the area as very low, as the media played very minimal role in that regard.

Auta and Messiah (2018) carried out a study, "An Empirical Investigation on Women's Access to "Living Healthy Programme" on Radio Nigeria in Kaduna Metropolis. Findings from the study showed that Living Healthy programme, has quite a number of listeners and has helped in enlightening women on health issues. Also, the results showed that many of the women who could not have access to the programme were due to the timing and language barriers.

Theoretical Framework

The study adopted the Social Cognitive Theory (SCT) as framework. The SCT was developed by Albert Bandura in 1977 to emphasize the role of observation and cognitive factors in learning and how to predict behaviour (Glanz, Rimer, & Viswanath, 2015). SCT proposes that human beings learn a behaviour through observing others perform that behaviour (Thompson, 2014). SCT is relevant to the present study because the simplicity of its content facilitates its use in understanding and addressing different phenomena of environmental health, the creation of knowledge and in professional education (Lipscomb, 2017). It increases critical and creative thinking by assessing current knowledge, and probes unanswered questions that can generate new disciplinary knowledge for environmental health communication campaigns within the inhabitants of Jos metropolis.

SCT also provides elements that can contribute to the design or adaptation of environmental health interventions that allow the achievement of goals in a practical environmental health situation. Likewise, different elements derived from the category of concepts of observational learning can be used in the implementation of television programmes (such as 'your wealth, your health') and the facilitation approach to them. These concepts can serve as a tool for the development of new competencies in environmental health communication campaign strategies taking into account that, by observing others, one can create rules of behaviour and a guide for action.

Research Methodology

The study employed mixed methods research design. Mixed methods research design combines elements of quantitative and qualitative research in order to answer research questions (George, 2021). According to George, the method provides a more complete picture rather than a standalone quantitative or qualitative study, as it integrates the benefits of both methods. 400 samples drawn from the inhabitants of Jos metropolis of Plateau State, numbering 1,096,300 (National Bureau of Statistics, 2017) using simple random sampling technique were adopted and served **a** 5 - point Likert type questionnaire with answering options: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2) and Strongly Disagree (1) for the purpose of collecting data.

The Likert scale items used were summed up to generate a composite score (data), which logically in totality measured a unidimensional trait (Subedi, 2016). Cronbach alpha test was carried out to test reliability of the instruments and items. Test showed reliability to be greater than 0.7. A case item correlation analysis was also carried out on the perceived task value scale comprising questionnaire items and the number of respondents (cases). This was shown to be valid at N= 400. The completed copies of the questionnaires were collated, coded and entered into SPSS version 23 and subsequently analysed and presented in tabular form for ease of visualisation.

Data Presentation, Interpretation and Analysis

Table 1: Demographic Data Presentation

Variables	Frequency	Percentage
1. Gender of Respondents		
Females	208	58.6
Males	147	41.4
Total	355	100
2. Age of Respondents		
18 - 28	82	23.1
29 - 38	158	44.5
39 - 48	71	20
49- 58	31	8.7
59+	13	3.7
Total	355	100
3. Occupation of Respondents		
Student	196	55.2
Civil Servant	91	25.6
Un Employed	68	19.2
Total	355	100
4. Marital Status of Respondents		
Single	220	62.0
Married	135	38.0
Total	355	100
5. Religion of Respondents		
Christianity	158	44.6
Islam	134	37.7
Others	63	17.7
Total	355	100
6. Do you own a TV set?		
Yes	300	84.5
No	55	15.5
Total	355	100
7. Is TV your primary source of information?		
Yes	286	80.6
No	69	19.4
Total	355	100.0
8. Do you Watch "Your Wealth, Your Health on NTA Jos Network Centre		
Yes	280	78.9
No	75	21.1
Total	355	100.0

Source: Field Survey 2022

Table above indicated that majority of the respondents, 58.6%, are females, 44.5% are aged between 29 - 38 years, 55.2% are students, 62.0% are single, 44.6% are Christians, 84.5% own a TV set, 80.6% use TV as their primary source of information and 78.9% watch "Your Wealth, Your Health on NTA Jos Network Centre. The finding suggested that the respondents were qualified to provide answers to the questions raised in the study since majority watch "Your Wealth, Your Health" on NTA Jos Network Centre.

Table 2: Rotated Component Matrix for the contents of the programme, "Your Wealth, Your Health" on NTA Jos Network Centre that inhabitants of Jos metropolis consider relevant in promoting environmental health in Jos metropolis.

	Component		
	Call for action	Visual Contents	Thematic
1. Contents that model positive responses which citizens can have to environmental health.	.967		
2. Contents with message that motivate the public to take action	.767		
3. Contents that are reinforced by delivering them in different ways during a programme			.965
4. Contents with visual environmental health problems		.990	
5. Contents with dramatized health issues		.924	
6. Contents whose programmes are packaged around one theme			.964
7. Contents with messages written by an expert in environmental health issues	.988		
8. Contents which have an established flow as message build on one another			.717
9. Contents that show the effects of risky environmental health behaviour		.994	
10. Contents produced in the language majority of people understand.	.954		

Sources: SPSS output 2022

Psychographic Data Presentation

Research Question 1: *What are the contents of the programme, "Your Wealth, Your Health" on NTA Jos network centre that inhabitants of Jos metropolis consider relevant in promoting environmental health in Jos metropolis?*

Principal Component Factor (PCA) analysis with varimax rotation was conducted to assess the underlying structure for the fourteen items of the Math Motivation Questionnaire. Three factors were requested, based on the fact that the items were designed to index three constructs: ***Contents That Call for Action, Messages with Visual Contents***, *and* ***Contents that are Thematic***. The Table above displays the items and factor loadings for the rotated factors, with loadings less than .700 omitted to improve clarity. This implied that respondents feel; *Contents that call for action, Messages with Visual Contents and are* the contents of the programme, "Your Wealth, Your Health" on NTA Jos network centre, that are relevant in promoting environmental health in Jos metropolis.

Research Question 2: *What is the impact of "Your Wealth, Your Health" on NTA Jos network Centre in promoting environmental health in Jos metropolis?*

From the Table 3, the Mean, Std. Deviation score, of each item of the questionnaire and the number of samples relating to the impact of "Your Wealth, Your Health" on NTA Jos network Centre in promoting environmental health in Jos metropolis is shown. A One sample *t*- test was performed on the sampled distribution using SPSS version 23 to test the formulated hypothesis.

Table 4 indicated that the one - sample *t*-test statistic is -.031 and the *p*-value from this statistic is .976. This p-value is more than 0.05 (the level of significance usually used for the test). Such a *p*-value indicates that the average means of the sampled population is *not statistically significantly different* from 2.90. The 95% confidence interval estimate for the difference between the population means and 2.90 is (- .1999, .1945).

Table 3: Descriptive Statistics of the impact of "Your Wealth, Your Health" on NTA Jos network Centre in promoting environmental health in Jos metropolis.

		Mean	Std. Deviation	N
1.	The programme has helped the public in environmental hazard recognition, evaluation and control.	3.20	1.233	280
2.	The programme has helped in workplace environmental design and engineering in the metropolis.	3.20	1.278	280
3.	The programme has always provided early warning of potential environmental hazards.	2.92	1.426	280
4.	The programme has always informed the public about environmental health management.	2.93	1.428	280
5.	The programme is a source of communication about environmental health.	3.23	1.232	280
6.	The programme has often aided the collection of information for proper decision making on environmental health.	3.01	.818	280
7.	The programme has promoted and motivated the public to change behaviour, and attitudes towards the environment.	3.23	1.277	280

Sources: SPSS output 2022

Table 4: One-Sample Test

	Test Value = 2.90					
					95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Means	-.031	9	.976	-.00273	-.1999	.1945

Sources: SPSS output 2022

Decision: Since the *p*-value from this statistic which is 0.976 is greater than 0.05 (the level of significance usually used for the test), the sampled population is therefore not statistically significantly different from 2.90 (the population mean); the Null hypothesis that says; *there is significant impact made by the programme, "Your Wealth, Your Health" on NTA Jos network Centre in promoting environmental health in Jos metropolis* is therefore rejected.

Table 5: Rotated Component Matrix for how the inhabitants of Jos Metropolis perceive the role, the programme, "Your Wealth, Your Health" on NTA Jos Network Centre plays in promoting environmental health in Jos metropolis.

	Educator	Communicator	Campaigner
1. The programme helps the public in environmental hazard recognition, evaluation and control	.956		
2. The programme helps viewers in Workplace environmental design and Engineering	.778		
3. The programme aids collection of information for proper decision making			.965
4. The programme provides early warning of potential environmental Hazards		.990	
5. The programme informs the public about environmental management		.994	
6. The programme improves organizational communication about environmental health issues			.964
7. The programme Increases knowledge of workplace planning and staffing	.989		
8. The programme is a form of communication about Occupational Health			.707
9. The programme helps the Involvement of employee in environmental safety		.993	
10. The programme motivates public to change behaviour, and attitudes	.954		

Sources: SPSS output 2022

Research Question 3: *How do the inhabitants of Jos Metropolis perceive the role, the programme, "Your Wealth, Your Health" on NTA Jos network centre plays in promoting environmental health in Jos metropolis?*

Principal axis factor analysis with varimax rotation was conducted to assess the underlying structure for the ten (10) items of how the inhabitants of Jos Metropolis perceive the role, the programme, "Your Wealth, Your Health" on NTA Jos Network Centre plays in promoting environmental health in Jos metropolis Questionnaire. Three factors were requested, based on the fact that the items were designed to index three constructs: Educator, Communicator and Campaigner. After rotation, the first factor accounted for 21.5% of the variance, the second factor accounted for 16.6%, and the third factor accounted for 12.7%. Table above displays the items and factor loadings for the rotated factors, with loadings less than .700 omitted to improve clarity. Table above shows a summary of component factor analysis results for how the inhabitants of Jos Metropolis perceive the role, the programme, "Your Wealth, Your Health" on NTA Jos Network Centre plays in promoting environmental health in Jos metropolis (N = 280).

Discussion of Findings

Findings from the demographic data indicated that 280 representing 78.9% respondents were qualified to provide answers to the questions raised in the study. On Research Question 1, respondents identified Contents that call for action, Messages with Visual Contents and Contents that are Thematic as the contents of the programme "Your Wealth, Your Health" on NTA Jos network centre that inhabitants of Jos metropolis consider relevant in promoting environmental health in Jos metropolis.

This finding is in agreement with Hajara (2014) who said that communication is a very vital tool for behavioural change because public health programmes invariably require behavioural change; behavioural change cannot occur if the specific target audience are not aware of the messages disseminated to them. Furthermore, Utalor's (2019) study asserts that television can be properly used for maternal health campaigns for its advantage of sound and motion picture and that maternal health messages should be promoted through broadcast media programmes such as drama, documentary and news.

On Research Question 2, respondents affected

the alternate hypothesis that *"There is* statistically *no significant impact made by the programme, "Your Wealth, Your Health" on NTA Jos network Centre in promoting environmental health in Jos metropolis".* The finding is in agreement with Nwankwo (2017) whose study on media role in environmental health education in Onitsha Urban, a metropolitan area with rapidly growing population, found that the level of environmental health education or awareness in the area is very low, as the media played very minimal role in that regard. Also, Akpoghiran (2015) found irregular and poor enlightenment campaigns by the broadcast media on solid waste management in all these states. Furthermore, the result also showed that positive attitude towards solid waste management depended largely on regularly broadcast media enlightenment campaigns. However, responsible environmental behaviour remains the best approach to solid waste management and other environmental problems.

On Research Question 3, respondents identified the role of Educator, Communicator and Campaigner as the major roles played by the programme "Your Wealth, Your Health" on NTA Jos network centre in promoting environmental health in Jos metropolis. This finding is in agreement with Burzyńska, Binkowska-Bury and Januszewicz, (2015) who found that despite the domineering and expansive role of the Internet, global reports on mass media still find television as the most popular source of information on health-related issues. Furthermore, Murphy, Hether and Rideout (2015) indicated that television, next to press and radio, is the medium for health information and may provide the viewer with medical knowledge. However, there seems to be an open question whether visual depiction of the aforementioned issues may shape health behaviours of the viewer and their actual idea on topics related to health.

Conclusion and Recommendations

The study conclusively arrived at three important results. i). viewers of the the programme "Your Wealth, Your Health" consider Contents that call for action, Messages with Visual Contents and Contents that are Thematic to be relevant in promoting environmental health in Jos metropolis; ii), viewers see no *statistically significant impact made by the programme "Your Wealth, Your Health" in promoting environmental health in Jos metropolis. iii). viewers of the programme perceived that* the role played by the programme is that of Educator, Communicator and Campaigner of environmental health issues.

It recommends that: i). Environmental health messages should be aggressively promoted through television programmes such as drama, documentary and news since it has the advantages of sight and sound. ii). Public enlightenment programmes such as, "your wealth, your health" should be strengthened through the media, to achieve any significant impact and to prevent further decay of the environment in Jos and iii). Aggressively educating the citizens on responsible environmental behaviour remains the best approach to solid waste management and other environmental problems in Jos.

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