

Factors Influencing Participation in Domestic Solid Waste Management in Dar es Salaam, Tanzania

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Abstract:

Background: Domestic solid waste management (DSWM) is a serious challenge in both urban and rural areas because by nature every activity done by human generates a certain amount of solid waste. Its effective management can be achieved through involving various stakeholders' - including media and local people; Media has a powerful role of raising public awareness and influencing positive perception and attitude towards DSWM as one of the fundamental factors that encourage effective participation. As such, this study aims to examine the factors that influence participation in DSWM among radio listeners in Dar es Salaam city, Tanzania. Specifically, it aims: to examine the extent of radio usage to obtain DSWM information among the head of households in Dar es Salaam city. Similarly, to analyze the relationship between radio usage, awareness, perception, attitude, and participation in DSWM in Dar es Salaam city. The study utilized structural functionalism theory.

Materials and Methods: It also employed quantitative research design specifically using the survey method with a questionnaire as an instrument for data collection. Using stratified random sampling, a total of 392 respondents from Temeke municipality participated in this study.

Results: Results show that radio plays a great role in Dar es Salaam city by offering educational programmes from different sectors. It also helps household members acquire useful information related to DSWM. In addition, the results revealed positive relationship among all tested variables.

Conclusion: Dar es Salaam heads of households tend to listen to radio programmes related to DSWM which help them improve their level of awareness, even change their perception and attitude towards the issue. Likewise, all tested variables made significant contributions on household participation in DSWM activities.

Key Word: Radio usage; Awareness; Perception; Attitude; Participation in DSWM.

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I. Introduction

The study presents domestic solid waste management (DSWM) issues in Tanzania, particularly Dar es Salaam city. A proper DSWM is a major challenge in a big city like Dar es Salaam, the largest city in Tanzania with a total population of more than 4.3 million¹. Domestic solid waste (DSW) is the unwanted, and discarded materials resulting from household daily activities². Its proper management involves several processes such as sorting, collecting, transferring, treating, and disposing of all unwanted products from the households³. DSWM issues are a serious concern in developing countries due to insufficient budgets, outdated technologies, scarce practical ideas, and low levels of public awareness on environmental issues^{4,5}. All these factors contribute to the extent of inappropriate waste collection, separation, storage, and disposal, creation of illegal dumping sites, poor skills, and instruments for waste management especially in slums and rock hill areas. At present, Tanzania produces more than 10,000 tons of solid waste per day, but only 40% of the total solid waste generated are properly collected and disposed of solid waste⁵. Whereas in a big city such as Dar es Salaam, it has been reported that about 40% of households use rubbish pits, 32.8% use garbage bins, and 25.5% of households dump their waste into water sources, valleys, pit latrines or other drainage areas^{6,7}.

Improper management of domestic solid waste causes all sorts of pollutions such as to the air, water, and land or soil⁸. These problems pose a risk to humans' health, economic and environmental impacts such as loss of manpower, damage to the tourism sector, as well as decreasing the value of the land^{9,10}. Despite several efforts taken by the government to address the problem, that include awareness campaigns, environmental trainings, seminars and workshops to community leaders, small entrepreneurs, and local citizen¹¹, DSWM continues to be a challenge in most rural and urban areas⁴. The issue is compounded by the public's insufficient knowledge concerning DSWM, a lack of awareness on its impacts, and the perception that DSWM is a responsibility of the government rather than the people¹². The study assumes media, particularly radio can play a powerful role in influencing households' participation in DSWM. Thus, the study has the following objectives: (1) to examine the extent of radio usage on obtaining DSWM information among the head of households in Dar

es Salaam city and (2) to analyze the relationship between radio usage, awareness, perception, attitude, and participation in DSWM in Dar es Salaam city.

Theoretical framework

The study was guided by structural functionalism theory. This theory sees society as an organized body with several parts that work together to maintain the stability¹³. Talcott Parson is one of the contemporary theorists who explained well the structural functionalism. He asserts that structural functionalism is like a human body which contain different parts functioning together for the survive of the body^{3,14}.

The key idea of the theory is that, the society is a stable system which constitutes different parts that are interrelated. Various institutions like family, education, religion, media, government, and law contribute positively to the operation or functioning of the system as a whole¹³. This theory was chosen due to its emphasis on the participation of various DSWM actors including media. Where, media serves several functions that include surveillance, correlation, knowledge transmission, entertainment and mobilization¹⁵.

In the context of this study, effective DSWM depends on the functions and integration of the different actors including media. This study assumes that media specifically radio should play its role well in informing, creating awareness, influencing positive attitude, perception and behaviour change as well as correlating with other stakeholders for easy and effective managing solid waste. Thus, this study adopted structural functionalism theory to examine the role of the radio in DSWM issues in Dar es Salaam city, Tanzania.

Factors influencing participation in DSWM

Participation is as a process through which stakeholders being involved in some institution or society matters including decision making on things that impact their lives¹⁶. In environmental management field, participation is as the process of several actors (local citizens/households, municipal authorities, media, NGOs and other affiliated institutions) to get involved in waste management activities¹⁷. Citizen participation in DSWM activities depends on several factors among others include their level of awareness, willingness and readiness, positive perception, and attitude towards the issue.

Awareness has a great impact towards citizens' participation in DSWM through the level of their understanding on the impact of solid waste¹⁸. As previous studies reported that a high level of awareness of DSWM substantially enhances citizen participation in DSW activities^{19,20}. This is because effective management of domestic solid waste goes along with community understanding towards the issues.

Perception is one of the main factors that influence individuals to participate in management issues²¹. Individuals perception seem to correlate with their participation in a certain action. If a person perceives a certain activity has more benefits than risks, the person will have a higher tendency to participate on it. As²² testified that when individuals perceive the DSWM activities as an easy task, they are more motivated to participate. People are most likely to be motivated to participate in DSWM activities if they have a positive perception of solid waste management issues²³.

Also, attitude is another factor that can influence people to participate in something. A positive attitude is likely to increase the intention of the individual to engage in waste management activities, while negative attitudes may be a source of waste management problems²⁴. This means each belief or feeling leads the action with a specific result or some other attribute. As supported by²³ people who feel that DSWM is a serious threat to their life were likely to participate in effective management activities. However, to achieve effective public participation in DSWM, several efforts should be made, including removing all negative attitude that people have towards DSWM¹⁷.

Furthermore, the improvement of any sector in society needs positive support from the media and the role of radio is not excluded. Media is a powerful factor that can influence the public to participate in solid waste management activities, as it has a special role of promoting environmental management behaviour. In waste management issues, mass media enhance the great knowledge, raise awareness and change people's attitude and their perception which in turn influences public participation in management issues²⁵. As reported by²⁶ that radio plays a powerful contribution as it creates awareness, educate, entertain and disseminate significant environmental information that offer solutions to environmental issues including DSWM.

Many developing countries, including Tanzania, use radio as a suitable communication instrument in raising public awareness and promoting sustainable solid waste management. Radio tends to raise individuals' consciousness on how they can properly manage their household garbage²⁷. It also plays a significant function in disseminating appropriate information concerning DSWM issues that helps in overcoming its negative implications and contributes to national development²⁰. The improvement of any society sector needs positive support from various actors including media. This is what²⁸ reported as mutual relationships between mass media, community, and the government.

Conceptual framework

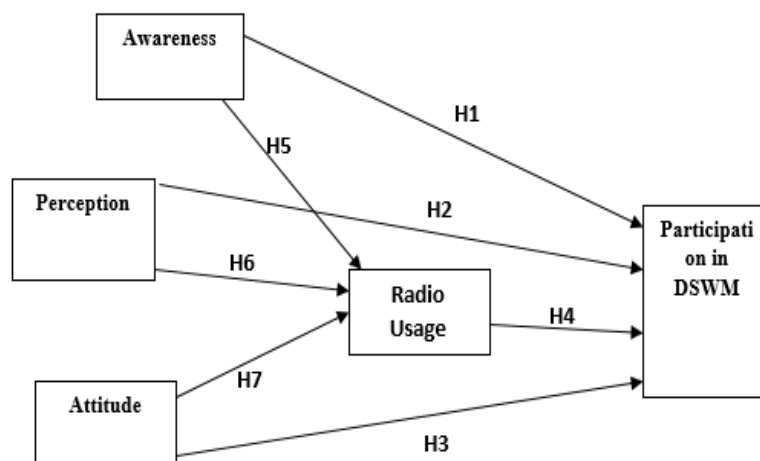


Figure 1: Conceptual framework of the factor influencing participation in DSWM

Summary of the Hypotheses

Based on previous literature and theoretical framework, a total of seven (7) hypotheses were derived to be tested for this study. Thus, the following set of hypotheses were proposed:

- H₁: Awareness is positively correlated with participation in DSWM.
- H₂: Perception is positively correlated with participation in DSWM.
- H₃: Attitude is positively correlated with participation in DSWM.
- H₄: Radio usage is positively correlated with participation in DSWM
- H₅: Awareness is positively correlated with radio usage.
- H₆: Perception is positively correlated with radio usage.
- H₇: Attitude is positively correlated with radio usage.

II. Material And Methods

A quantitative research design with the survey method was employed in this study. A self-administered questionnaire was used as an instrument for data collection. The exercise, started from 22nd September until 22nd November 2019.

The study population are all households situated in Temeke municipality, where its total population are estimated to be 314,264²⁹. The stratified probability sampling was applied to obtain a sample size of 400 households, where the population was divided into four groups by considering their topographical restrictions. Data collection permissions were sought and gained from Temeke municipal authority.

The study tested the reliability of the items for all the variables selected for the pilot and actual studies, where the Cronbach’s alpha ranging from .840 to .941 for the pilot study and from .736 to .948 for the actual study. All variables’ items tested are reliable as Cronbach’s alpha exceed the threshold of .70. Therefore, it indicates that the consistency of the research instrument “fits” well with the actual reality.

Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 23, where descriptive statistics (mean, standard deviation, and percentage) were obtained. Also, inferential statistics (one-sample *t*-test and zero-order correlation) were performed.

Table no 1: Reliability of the variables

Section	Variable	Reliability (Cronbach’s α)	
		Pilot Study (N = 77)	Actual Study (N = 400)
2	Radio usage	.941	.948
3	Awareness	.899	.898
4	Perception	.905	.855
5	Attitude	.840	.853
6	Participation in DSWM	.890	.736

III. Result and Discussion

Demographic characteristics of respondents

Out of 400 households participated in the study only 392 were deemed appropriate for data analysis. Table no 2 shows the demographic information of the respondents from the households in this study such as gender, age, marital status, education level, employment status, monthly household income, residential topographical area, and size of household.

Table no 2: Demographic characteristics of the respondents.

Demographic Characteristic	Categories	Frequency	Percentage (%)
Gender	Male	161	41.1
	Female	231	58.9
Age group	Below 20 years old	5	1.3
	21-30	139	35.5
	31-40	101	25.8
	41-50	78	19.9
	51-60	38	9.7
	Above 60	31	7.8
Marital status	Single	120	30.6
	Married	219	55.9
	Divorced/widowed	53	13.5
Education level	Primary	206	52.6
	Secondary	117	29.8
	Cert/diploma	39	9.9
	Bachelor's degree	21	5.4
	Master's/PhD	9	2.3
Employment status	Unemployed	102	26.0
	Employed	228	58.2
	Pensioner	12	3.1
	Homemaker/housewife	50	12.7
Monthly household income	Less than 300,000 Tsh	244	62.3
	300,001-500,000 Tsh	92	23.5
	500,001-700,000 Tsh	39	9.9
	700,001 Tsh and above	17	4.3
Residential topographical area	Unplanned hill	52	13.3
	Planned hill	21	5.4
	Low density	68	17.3
	Medium density	85	21.7
	High density	166	42.3
Size of household	Less than two people	92	23.5
	3-5 people	218	55.6
	6 people and above	82	20.9

The findings indicated that in Temeke municipality, there are more female heads of households (231) compared to male (161) aged between 21-40 years old. Many of them were married, have low level of education (primary school level and below), a very low percentage attained a secondary level of education and above. Therefore, this illustrates that in Temeke, women are comparatively young with low educational level, and they are energetically participating more in household activities than men. As previous studies reported, women consume much of their free time at home compared to males^{30,31}, where they manage to engage in household activities like cooking, cleaning the house, collecting and disposing household trashes. In Tanzania women involve much in household activities as part of their traditional tasks, while males protect their family, search for food, and participate in other society issues³².

Though the finding shows education level of the heads of households were low; they were employed and receiving a monthly income of less than 300,000 Tsh. Majority of them live in areas of high and medium density with households' size of between three to five people. This implies that many of the heads of households in Temeke belongs to the low-income group and mostly living in unplanned settlements. Unplanned areas have no proper infrastructure such as sanitation, drainage, water system, and roads for easy access. Thus, provision of effective waste management service would be a challenge.

Radio Usage Information

One sample *t*-test was administered to determine the extent of radio usage in obtaining information related to DSWM as part of achieving the first study objective that is "to examine the extent of radio usage in obtaining DSWM information among the heads of households in Dar es Salaam city". The test-value was set at 3 because it represents the positive response to the items, where all the items were measured on 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The finding revealed that eight items are positively rated and statistically significant to issues related to DSWM. Specifically, the item 'I use radio to obtain information on health programmes, i.e., Cholera, Malaria, Typhoid' has the highest overall percentage of 71.7% ($M = 3.584$, $SD = 1.074$), whereas the item with the lowest percentage is for item 10: 'I obtain my recycling knowledge from the radio' (60.1%), with a mean value of $M = 3.005$ ($SD = 1.126$). The overall mean for radio usage in obtaining DSWM is positive and significant with a percentage of 65.9% and $M = 3.297$ ($SD = 0.886$) where the *t*-value findings show a positive and statistically significant ($t = 6.630$, $p = .000$). This signifies that the overall heads of households agreed to use radio in obtaining several information concerning DSWM issues.

Generally, majority of the respondents agreed that they mostly use the radio for obtaining various information regarding DSWM issues, such as health information, government campaigns on DSWM, knowing the best waste storage to use, listening to solid waste programmes, and realise their responsibility towards effective management of solid waste. Thus, the results indicate that radio usage benefits the household members in Dar es Salaam city because it helps them obtain useful information associated to proper DSWM. The findings agree to the study conducted by³³ who revealed that radio has a powerful contribution on promoting public awareness concerning DSWM issues, which in turn motivate them to participate in management process. However, DSWM programmes aired in the broadcast media in Dar es Salaam were very few. This is because many of the Africans media, Tanzania in particular is profitable in nature, so they focus more on politics, sports and entertainment programmes as they attract a larger audience and have many sponsored advertisements. This corresponds to what³⁴ found in his study conducted in Nigeria, where programmes related to solid waste management were not popular compared to the other social-related programmes.

The relationships between participation in DSWM and selected variables

Zero-order correlation was used to test the relationships between awareness, perception, attitude, radio usage and participation in DSWM. Seven hypotheses were tested and Table 3 shows that there are strong relationships between attitude and perception ($r = .708$, $p = .000$); perception and awareness ($r = .650$, $p = .000$); attitude and awareness ($r = .628$, $p = .000$); and moderate relationships between attitude and participation in DSWM ($r = .585$, $p = .000$) and perception and participation in DSWM ($r = .486$, $p = .000$). The results also show very weak to weak relationship between radio usage and participation in DSWM ($r = .197$, $p = .000$); radio usage and perception ($r = .137$, $p = .000$); radio usage and attitude ($r = .191$, $p = .000$); awareness and participation in DSWM ($r = .351$, $p = .000$); and radio usage and awareness ($r = .287$, $p = .000$). These results address the second objective which support all tested hypotheses (H1, H2, H3, H4, H5, H6 and H7). There are positive relationships between all independent variables and the dependent variables ranging from weak to strong as summarized in Table no3.

Table no 3: Zero-order correlation between radio usage, awareness, perception, attitude, and participant in DSWM

Variable (N = 392)	M**	SD	PIDSWM	AODSWM	PODSWM	ATTDSWM	RUODSWM
PIDSWM	4.283	0.468	1				
AODSWM	4.113	0.567	r=.351, p=.000	1			
PODSWM	4.234	0.491	r=.486, p=.000	r=.650, p=.000	1		
ATTDSWM	4.236	0.500	r=.585, p=.000	r=.628, p=.000	r=.708, p=.000	1	
RUODSWM	3.297	0.886	r=.197, p=.000	r=.287, p=.000	r=.137, p=.000	r=.191, p=.000	1

The findings show that H1 is supported with a weak positive relationship. This finding supports previous studies^{35,36}. This indicates that if people are provided more education regarding waste management issues, there is a higher chance for them to participate. H2 is also supported with a moderate positive relationship. This is consistent with the reports by^{23,37} where the more people perceive positive about environmental issue, the more they become motivated to participate on management activities. That means positive thought is one of the potential factors that influence public actions in terms of long-term effect. In addition, H3 is also supported, with a moderate positive relationship which is consistent with the findings by^{24,38,39}. This implies that the higher level of individuals attitude influences the degree of their participation in the issue. Thus, positive attitude encourages good behavior on DSWM activities.

Furthermore, the results show that all H4, H5, H6 and H7 are supported with a weak positive relationship. This signifies that if people are more aware, have positive perception and attitude towards DSWM issues, there is a higher chance for them to use radio for accessing DSWM information. This finding supports past studies such as^{40,41,42,43} revealed that, when people are extremely use media to access for a particular program tend to change their attitude, perception and become more familiar towards the issue.

IV. Conclusion and Recommendations

More female participated in the study, aged between 21- 40 years old; they were married with low education level. Though, they were mainly employed but with low-income level, and residing in high density areas with the households' size of 3-5 people.

The study analysed for the level of radio usage, specifically in obtaining DSWM information as part of answered objective no1. The results revealed that in Dar es Salaam city radio plays a great role in offering educational programmes from different sectors. This evident during the outbreak of COVID-19 pandemic, radio assumed a venue for teaching and learning for primary and secondary schools following temporary closure⁴⁴. It also helps household members acquire useful information concerning DSWM.

The study was conducted under the Structure Functionalism theory whereby seven main hypotheses were proposed. The findings revealed that, all the hypotheses proposed were supported by positive correlation between all variables. Thus, the households' awareness, perception, attitude, and radio usage do affect participation in DSWM.

This study conducted during dry season where management of household solid waste is easier compared to rain season. Therefore, a comparison study between rainy and dry seasons is recommended.

The study did not look at the differences between the categories of demographic factors with participation in DSWM. Future studies should consider testing the demographic differences by applying the knowledge gap theory.

It also focused only on five variables. Hence, zero-order correlation was used for testing the correlation between the studied variables. The results showed that independent variables have a great role in influencing heads of households' participation in DSWM. Thus, future studies may consider application of Structural Equation Model (SEM).

References

- [1]. National Bureau of Statistics & Office of Chief Government Statistician (NBS & OCGS). 2012 population and housing census: Population distribution by administrative areas. Dar es Salaam, Tanzania: NBS & OCGS. 2013
- [2]. Solomon AO. The role of households in solid waste management in East Africa capital cities. *Environmental Policy*. 2011; 4(2): 2220-2228
- [3]. Omolawal SA, Shittu OS. Challenges of solid waste management and environmental sanitation in Ibadan north local government, Oyo State, Nigeria. *African Journal for the Psychological Study of Social Issues*. 2016; 19(1):129-142.
- [4]. Dar es Salaam City Council (DCC). (2015). Solid waste management Dar es Salaam Tanzania. 2015.
- [5]. National Bureau of Statistics (NBS). National environment statistics report (NESRM), 2017 Tanzania Mainland. Dar es Salaam, Tanzania. NBS.
- [6]. Abalo EM, Agyemang S, Atio S, Ofosu-bosompem D, Peprah P, Ampomah-sarpong R. Environmental sanitation unleashed: Effectiveness and challenges of the national sanitation day as a community sanitation participatory approach in Aboabo, Ghana. *Cogent Environmental Science*. 2017; 25(3): 1-20.
- [7]. Nmere ON, Okolo VO, Abugu JO, Alio FC, Aneto JC. Influence of public relations' media public enlightenment campaign and community participation strategies on waste management. *Problems and Perspectives in Management*. 2020; 18(1): 82-96.
- [8]. Yoda RM, Chirawurah D, Adongo PB. (2014). Domestic waste disposal practice and perceptions of private sector waste management in urban Accra. *BMC Public Health*. 2014; 14(1): 1-10.
- [9]. Asamoah G. Factors which influence the buying behaviours of customers with multiple regular customer cards. *Semantic scholar*. 2012
- [10]. Patrick AI, Ferdinand O. Adopting broadcast media sensitization campaigns for solid waste management. *Journal of Mass Communication & Journalism*. 2014; 4(8): 4-9.
- [11]. Kalwani JD. Understanding Dar es Salaam city municipal solid waste management crisis through in-depth study for a sustainable solution. *The African Resources Development Journal*. 2016; 2(2): 11-25.
- [12]. Lubwama A. The practices and challenges for municipal solid waste management in Temeke Municipality, Dar es Salaam, Tanzania. *The Open University of Tanzania, Repository*. 2017
- [13]. Babbie E. *The practice of social research*. Wadsworth Cengage Learning. 2013
- [14]. Ritzer G, Stepnisky J. *Contemporary sociological theory and its classical roots*. Los Angeles: Sage Publications, Inc. 2017
- [15]. Chipindula H, Mwangi JE. Assessing the role of village community banks in social empowerment of women within households in rural communities of Mtwara district, Tanzania. *Research on Humanities and Social Sciences*. 2015; 5(20): 134-142.
- [16]. Mukama T, Ndejjo R, Musoke D, Musinguzi G, Halage AA, Carpenter DO, Ssempebwa JC. (2016). Practices concerns, and willingness to participate in solid waste management in two urban slums in central Uganda. *Journal of Environmental and Public Health*, 2016; 1:1-8.
- [17]. Yakubu KN, Mado H. Assessment of community participation in solid waste management in Kaduna Metropolis, *Proceedings of the Nigerian Environmental Society National Conference: Deployment of Green Initiatives for Economic Diversification in Africa*, at Nigeria. 2018
- [18]. Pertiwi RF, Muliarto H. Public awareness on solid waste handling in Bandar Lampung. *Proceeding of the 4th International Conference on Community Development in ASEAN, Phnom Penh, Cambodia*. 2017
- [19]. Banga M. Household knowledge, attitudes and practices in solid waste segregation and recycling: The case of urban Kampala Recycling. *Zambia Social Science Journal*. 2013; 2(1): 1-14.
- [20]. Koser R. Role of mass media in public awareness about household waste management: A case study in Lahore (Pakistan). *Norwegian University of Life Sciences*. 2017
- [21]. Shanthi R, Kannaiah D. Consumers' perception on online shopping. *Journal of Marketing and Consumer Research*. 2015; 13(1): 14-21.
- [22]. Mahgoub Y, Arvidsson N, Urueña A. Emergence of a digital platform based disruptive mobile payments service. *International Journal of E-Business Research*. 2018; 14(3):1-19.
- [23]. Tan S, Wok S. Attitude as mediating variable on relationship among participation, awareness and perceptions on bebasplastik campaign. *Proceeding of the 1st Melaka International Conference on Social Sciences 2017 (Melicoss '17)* (pp. 14-24). University College of Islam Melaka. 2018
- [24]. Kilagwa R. The influence of awareness, attitude and intention on preventive actions taken during COVID-19 in Tanzania. *Journal of the Pacific and Asian Communication Association*. 2020; 3(1): 36-52.
- [25]. Sharma SK, Gupta YK. Mass media for health education (A study in the state of Rajasthan). *Multidisciplinary International Journal*. 2017; 1(1): 26-39.
- [26]. Jharotia AK. Role of media in enhancement of environmental awareness. 2018
- [27]. Gabriel GK. The role of national radio in solid waste management in Juba: A case study of South Sudan Radio. *Semantic scholar*. 2015
- [28]. Ndisi OR. Media censorship in the devolved system of governance in Kenya. *University of Nairobi*. 2017
- [29]. Kilagwa R, Wok S, Ahmad Z. Level of participation in domestic solid waste management among radio listeners in Dar es Salaam city, Tanzania. *International Journal of Politics, Publics Policy, and Social Works (IJPPSW)*. 2020; 2(7): 62-78.
- [30]. Idris I. Barriers to women's economic inclusion in Tanzania.
- [31]. Shabani R. Factors affecting community participation in solid waste management in Lindi municipal council Tanzania. *Semantic scholar*. 2015
- [32]. Addai KN, Danso-Abbeam G. Determinants of willingness to pay for improved solid waste management in Dunkwa-on-Offin, Ghana. *Journal of Agriculture and Environmental Sciences*. 2014; 3(1): 1-9.
- [33]. David RA, Mberia HK, Mulyungi P. Role of the broadcast media on solid waste management in the city of Kigali Rwanda. *International Journal of Science and Research (IJSR)*. 2019; 8(5): 1177-1181.
- [34]. Idamah AP. Influence of broadcast media enlightenment campaigns on solid waste management in south-south of Nigeria. *Journal of New Media and Mass Communication*. 2015; 39(1): 10-62.
- [35]. Abtahi M, Saeedi R, Boroojerdi MN, Fakhraefar A, Bayat A, Mokari S, Aliasgari F, Ankoti A, Alizadeh M. Public awareness, education, and participation in solid waste management in Tehran. *Journal of Health in the Field*. 2015; 3(2): 1-11.
- [36]. McAllister J. Factors influencing solid waste management in the developing world. *Utah State University, University libraries*. 2015
- [37]. Ayob SF, Sheau-Ting L, Abdul Jalil R, Chin HC. Key determinants of waste separation intention: Empirical application of TPB. *Facilities*. 2017; 35(11-12), 696-708.
- [38]. Jain VK, Agarwal S. Understanding purchasing behaviour towards environmentally sustainable products using theory of planned Behaviour: An structural equation modeling approach. *Journal of Business and Management (IOSR-JBM)*. 2017; 19(8): 14-23.

- [39]. Malik NK, Abdullah S, Manaf L. Community participation on solid waste segregation through recycling programmes in Putrajaya. *Procedia Environmental Sciences*. 2015; 30(1): 10-14.
- [40]. Kapoor N. Role of mass media in promotion of environmental awareness along with skill development among the rural people of Shringverpur, Allahabad district, India. *International Conference on Chemical, Biological and Environment Sciences (ICCEBS)*.
- [41]. Mwantimwa K. Demographic predictors of listening to radio and watching TV programmes among agro pastoralists in Tanzania. *Athens Journal of Mass Media and Communications*. 2018; 4(3): 205-218.
- [42]. Otinga CS, Ngigi S. Media and environmental awareness in Kenya: A case of TV. *New Media and Mass Communication*. 2018; 67(1): 1-26
- [43]. Twumasi K. Awareness and practice of solid waste management. *European Journal of Earth and Environment*. 2017; 4(1): 39-47.
- [44]. Feruzi SM, Li Y. (2020). Application of Edtech in Tanzania: Effectiveness of radio and television in teaching and learning amid COVID-19 pandemic. *International Journal of Advanced Engineering Research and Science*. 2020; 7(8): 314-323.

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