

## Effect of Value Counselling on Attitude Change Toward Waste Disposal: Implication for Flood Disaster Management in Kontagora, Niger State

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### Abstract

*Flood disaster in Nigeria has become a regular reoccurring situation which has disturbing impacts on human livelihoods and infrastructural development. It has caused widespread destructions to human lives and properties. Causes of this disaster have been traced to include poor practice of waste disposal. This implies attitude problem of people. The study examined the effect of values counselling in improving attitude change with implication for flood management. The research design adopted for the study was pre-test post-test quasi experimental design with control group. The population of the study comprised of 44 Kontagora community residents that were found dumping refuse on the waterways during the 2022 rainy season. Through initial counselling interview, the purposively selected sample of 44 was assigned to groups for the study. With the use of questionnaire titled Waste Disposal Behaviour Scale, pre-test and post-test data were collected and analyzed using Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA). The result obtained indicated that, there is significant effect of value counselling on attitude of participants toward waste disposal in Kontagora and there is no significant difference in the attitude towards waste disposal among participants exposed to value counselling on the basis of education level. It was recommended among others that value counselling should be given to community people especially at the eve of every raining season. Values re-orientation programmes should be organized regularly on waste management practices with reference to proper hygiene, poor practices of waste disposal, devastating effect of flood disaster and wide spread of diseases.*

**Key words:** Values, Attitude, Values Counselling, Flood, Disaster, Waste Disposal

## Introduction

Flooding is a global issue that requires urgent attention. Flood disasters have been and remain the most natural disaster in human history. In Nigeria, it has become an annual re-occurring situation which has worrying impacts on the lives and properties of the people and infrastructural development of the nation. The devastating effect of flooding tells on the nation's economy (especially agriculture), environmental sector (including soil, vegetation and wildlife). Flood disasters are caused by numerous factors. Agbonkhese et al, (2014) identified the causes to include rapid population growth, poor governance, poor drainage facilities and decaying infrastructures, lack of proper environmental planning and management strategies, poor practice of dumping waste/refuse, climate change and inadequate preparedness. All these factors are dependent on the activities of man. According to Glago (2021), flood disasters are caused by natural phenomena, but their occurrences and impacts have been intensified through human actions and inactions.

The fact about Kontagora is that public waste disposal bins are not made available in many locations for collecting and keeping refuse out of sight. Therefore, residents dump refuse anywhere they find space. When refuse or waste is dumped indiscriminately especially when it rains, it blocks drainages which prevent water run-off, making areas more vulnerable to flooding. According to Musa et al (2017), in Nigeria, dumping of refuse in drainages is mostly found among the people living in the slums. These are the poor and ignorant people who lack the significance of waste management and as such participate in unlawful disposal of refuse.

It is important to note that attitude of the people or residents are important factors in addressing issues related to disaster management in Nigeria. According to Haider (2015), perception and behaviour of people towards waste management is considered to be a factor that can affect the success of a waste management system (as cited in Alemu & Estifanos, 2019). Majority of the factors responsible for flood disaster are dependent on the attitude and behaviour of man in his environment. Attitude represents how man feels or thinks about something. The emotional disposition and mental perception of waste management practices of man is essential in the management of disasters. Community people litter the environment with waste materials. Some not only dispose their waste material, they defecate in the river, gutter or dump site. These do not only result to flood disaster but also lead to health related issues in the community.

Flood is a natural disaster, but the cause depends on several influencing factors. In the submission of Kron (2014), one cannot influence the intensity of rainfall, but can to some extent control the formation of a hazardous flood. He observed further that deforestation, the draining of wetlands, urban development and surface sealing, mono-cropping in agriculture and river training often intensify the hazard; afforestation, river restoration and the establishment of retention areas may mitigate it. Oyekan and Sulyman (2015) advanced that waste management practices in Nigeria is appalling; they report that only about 14% of Nigerian households have access to satisfactory refuse disposal system and in both rural and urban areas of the country, refuse is buried, burnt or disposed-off haphazardly into rivers, streams, canals, forest and open spaces.

It is observed that, government and non-governmental organizations' efforts and interventions come after the flooding incidents. Even when the Nigerian Meteorological Agency (NIMET) alerts the government and Nigerian populace of an expected rainfall above normal in some parts of the country which might lead to flooding, the disposition of government agencies toward environmental coordination and management is poor and the attitude display by generality of the people to the warning prevent adequate action towards preventing and managing the disaster. The finding of Haider et al. (2015) in their studies revealed that the perception and behaviour of people towards waste management is considered to be a factor that can affect the success of a waste management system.

One of the factors that determine attitude is values that one holds. From the cultural perspective, Osalusi and Ajayi (2021) consider values as statements of what ought to be. These are qualities that define people, influence people's behaviour and attitude and serve as broad guidelines in problem solving, decisions taking or goals setting (Akpan & Okoro, 2018). Community values are shared beliefs held by individuals in a community. These values serve as norms, guiding principles and standard for behaviour. According to the Destinations International Advocacy Workbook (2021), community values are the non-negotiable core principles or standards that the community's residents wish to maintain. They must be acknowledged, honored and constantly defended to ensure that change and development occur in accordance with the values. Community values direct the community's vision, mission and plan. This guides the setting of goals and objectives, identification of activities, implementation of policy, projects, budgets and delivery of services in a community.

Counselling is not only rehabilitative, it is also preventive in nature, therefore can be employed to prevent or reduce the effect of certain occurrences. Counselling is a process of helping an individual becomes fully aware of his/herself, the society and its values and the manner in which he or she influences and is responding to the influence of the environment. Value counselling is a professional relationship which helps individuals in the community to be aware of the shared values of the community in relation to their behaviour for the purpose of communal peace, unity and development. Communities are often affected by traumatic events and experiences such as flood disaster. Value counselling in this study is used as an intervention to help residents of Kontagora to understand the values of the community in relation to their action and reaction as it affects the management of flood disaster within the community.

The study of Nazirova and Borbala (2024) comprehensively reviewed empirical studies that utilized Schwartz's value model and corresponding measurement scales to analyse the relationships between basic human values, attitudes and behaviours. The study summarized the conditions under which an individual's internal values activate and how they influence their actions. The analysis found that, basic human values, directly and indirectly, impact attitudes and behaviours regardless of the analytical approaches and contextual factors. The study of Albarracin and Shavitt (2018) reviewed covers research on attitudes and attitude change published between 2010 and 2017. Three context were used in this understanding The first context is that of a person as a whole with consideration of values, general goals, language, emotions and human development; the second context is social context with consideration of persuasive messages, social media, and culture; while the third context is socio-historical context highlighting the influence of unique events, including socio-political, economic, and climatic occurrences. In relation to values, the study found that values influence attitude change. They stated that a person with universalist values probably has a favourable attitude toward policies that foster equality; a person with security values is likely to favour policies that assure safety and stability in their environment. The study of Mamady (2016) centred on factors Influencing Attitude, Safety Behaviour, and Knowledge regarding Household Waste Management in Guinea. The objective of this study was to identify socioeconomic and demographic factors associated with practice, knowledge, and safety behaviour of family members regarding household waste management and to produce a remedial action plan. The study found that no education background, income, and gender variables were independently associated with indiscriminate waste disposal. It is against this background that the effect

of value counselling on attitude change of Kontagora residents towards flood disaster management was conducted.

### **Statement of the Problem**

The common means of waste disposal in Kontagora are dumping on the water ways, open field dumps and open burning. The reason for this may basically be lack of government provision of waste disposal bin in all areas of the community. In Kontagora, waste management collection and disposal have been a challenge; the government agents truck that collect waste are so few that it took probably a long time before getting to some areas. The researcher observed that the residents of the community in the study area dispose their waste materials on the roadside, open field and in the waterways most especially during rainy season. The waste disposal in the waterways resulted to the blockage of the water passage and thereby preventing effective running of water which contributed greatly to flood disaster in the environment. The effect of this resulting from the attitude of the residents is flood which causes loss of life, collapse of building and destruction of properties. Unless there is change of attitude towards indecent disposal of waste, the effect of flood will continue especially in the river and water areas. This makes the researchers to investigate the effect of value counselling on attitude of residents towards indecent waste disposal.

### **Objectives of the Study**

1. To investigate the effect of value counselling on attitude of participant toward waste disposal in Kontagora, Niger State.
2. To investigate the difference in the attitude towards waste disposal among participants exposed to community value counselling on the basis of education level.

### **Hypotheses**

Two hypotheses were tested in this study at 0.05 significant levels.

1. There is no significant difference in the attitude towards waste disposal among participants exposed to community value counselling.
2. There is no significant difference in the attitude towards waste disposal among participants exposed to community value counselling on the basis of education level.

## Methodology

Pre-test Post-test Quasi-experimental research design with control group was adopted for the study. The population for the study comprised the 44 residents observed dumping refuse on the waterways in Kontagora during the 2022 raining season. Through initial counselling interview, a purposively selected sample of 44 was assigned to groups (experimental and control) for the study. Questionnaire titled Waste Disposal Behaviour Scale (WDBS) was used in this study to obtain pre-test and post-test data for the study. The WDBS was developed by the researchers using the Likert-type scale of Strongly Agree (SA), Agree (A), Strongly Disagree (SD), and Disagree (D). The WDBS was given to experts in the department of sociology, counselling and test and measurement for content validation. The corrections made were effected which adjudged the instrument to be valid for the study. Using split half method of reliability, the instrument was administered on ten representative sample identified by the researchers which were not part of the study. The scores were correlated using Pearson Product Moment Correlated Co-efficient and the coefficient of 0.79 was obtained which was considered adequate for the study.

The value counselling intervention lasted for eight weeks of two hours interaction per week. The intervention centered on re-orientating participants of the community values and its implications on disaster management. There were three phases of the intervention; the pre-intervention, intervention and post-intervention. In the pre-intervention phase, pre-test data was obtained. During the counselling intervention, values such as hygiene, good health, peaceful coexistence and communal living were considered using value voting and public interview strategies. The Waste Disposal Behaviour Scale (WDBS) was re-administered to the participants to obtain post intervention data. The data collected was analyzed using Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA) at 0.05 level of significance.

## Results

**H0<sub>1</sub>:** There is no significant difference in the attitude towards waste disposal among participants exposed to community value counselling.

**Table 1:** Means and Standard Deviation for Pre-test and Post-test Scores Comparing Treatment and Control Group on Attitude towards Waste Disposal

Groups	Test	N	Mean	SD	Post-test Mean Diff
Experimental	Pre-test	22	31.36	2.49	
	Post-test	22	17.23	1.95	12.52
Control	Pre-test	22	30.64	2.77	
	Post-test	22	29.75	2.15	

Table 1 shows the Pre-test and post-test mean scores of participants exposed to value counselling (experimental group) and those that were not (control group). The table indicated that participants in the experimental group have pre-test mean and standard deviation score of 31.36 and 2.49 while those in the control group have 30.64 and 2.77 respectively. On the other hand, the post-test mean and standard deviation scores of the participant in the experimental group were 17.23 and 1.93 while that of a control group were 29.75 and 2.15. the result revealed that there is a significant difference in the mean scores of pre-test and post-test scores ( $31.36 - 17.23 = 14.13$ ) of the experimental group while the difference in the pre-test and post-test scores ( $30.64 - 29.75 = 0.89$ ) of the control group is not significant. Furthermore, the mean difference of post-test scores ( $17.23 - 29.75 = -12.52$ ) in both groups is in favour of the experimental group. This implies that the intervention has effect on the participants' attitude towards waste disposal and not any confounding variable caused the change in attitude. To establish this inference further and make a reasonable conclusion, One-way ANCOVA statistics is conducted as show in table 2.

**Table 2:** One-Way ANCOVA for Effect of Community Value Counselling on Participants' Attitude towards Waste Disposal

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	273.813a	8	34.227	1.841	.164
Intercept	1203.471	1	1203.471	64.720	.001
Control G	11.610	1	11.610	.624	.445
Treatment	373.573	7	53.367	5.201*	.023
Error	123.140	12	10.261		
Total	16516.000	22			
Corrected Total	496.952	21			

\*  $p < 0.05$

Table 2 shows that there was an overall statistically significant difference in post-intervention attitude ( $F [7, 12] = 5.20; p < 0.05$ ) between the different interventions (control group) once their means had been adjusted for pre-intervention (pretest). This means that, there is a positive change in the attitude of the participants towards waste disposal having gone through six-week value counselling sessions. Thus, there is a reduction in the rate at which they dispose waste carelessly and unlawfully. Therefore, the hypothesis which states that there is no significant effect of community value counselling on attitude of participants towards indecent waste disposal in Kontagora is rejected.

**H0<sub>2</sub>:** There is no significant difference in the attitude towards waste disposal among participants exposed to community value counselling on the basis of education level.

**Table 3:** One-Way ANOVA Showing Participants' Attitudinal Change at Post-Intervention Based on their Level of Education

Source	Sum of Squares	df	Mean Squares	Cal. F	p-value
Between group	18.650	2	9.325	1.84	0.185
Within group	101.350	20	5.068		
Total	120.000	22			

Table 3 presents one-way ANOVA showing participants' attitudinal change at post-intervention with respect to their level of education. There was no statistically significant difference in the participants' educational levels ( $F [2, 20] = 1.84; p < 0.05$ ). Since the calculated p-value is greater than the 0.05 level of significance, the hypothesis which states that there is no significant difference in the attitudinal change of participants in the post-intervention of community value counselling on the basis of their educational level is retained. This implies that participants' attitude changes positively at all levels of their educational background.

### Discussion of Findings

The study investigated the effect of community values counselling on attitudinal change: Implication for flood disaster management in Kontagora, Niger State. It is observed that participants' behaviour towards waste disposal in the drainages and waterways was high. The participant strongly agree during the eight weeks value counselling intervention that such practice causes blockage of waterways and leads to flood disaster which resulted to loss of lives, properties, farm produce and businesses. The findings of this study revealed that the null hypothesis one which states that there is no significant difference in the attitude towards waste disposal among participants exposed to community value counselling is rejected. It shows that there was an overall statistically significant difference in post-

intervention attitude of participants. This means that there is a positive change in the attitude of the participants having gone through eight weeks community value counselling sessions on waste disposal compared to the control group. This supports the study of Kulin (2011) which found that values play an important role in attitude, though the impact of values on attitudes differs considerably across national contexts. Albarracin and Shavitt (2018) found that values influence attitude change. They stated that a person with universalist values probably has a favourable attitude toward policies that foster equality; a person with security values is likely to favour policies that assure safety and stability in their environment. Therefore individuals with community hygiene values would have favourable attitude towards positive waste management system as found in the present study. Furthermore, the study of Nazirova and Borbala (2024) found that, basic human values, directly and indirectly, impact attitudes and behaviours regardless of the analytical approaches and contextual factors.

As a follow up service, the researcher monitor the participants in the 2023 rainy season in which the participants were found not to engage in the practice of disposing waste in drainages and waterways. The participants were found putting their waste in sacks and waste bin provided in a corner of the house until government collector comes around. The significant effect may be due to the fact that values are mainly positive and serve as guiding principles to human action and reaction to situations and circumstances. The exposure of the participants to hygiene and sanitation related value and how they affect the residents and the entire community have contributed to the change in attitude of participants towards indecent dumping of waste especially in the waterways. Stern, Kalof, Dietz and Guagnano (1995) explored a model in which individuals construct attitudes to new or emergent attitude objects by referencing personal values and beliefs about the consequences of the objects for their values. It was found that a subset of the major clusters identified in value theory is associated with willingness to take pro-environmental action and this is a function of both values and beliefs. In the present study, the community value counselling intervention is to bring about attitude change of the residents towards waste disposal management.

The findings retained the second hypothesis of this study which states that there is no significant difference in the attitude towards waste disposal among participants exposed to community value counselling on the basis of education level. This indicates that participants' attitude change positively irrespective of their educational background. This is corroborated by the study of Mamady (2016) which found out that no education background, income, and gender variables were independently

associated with indiscriminate waste disposal. This means that the level of education of participants does not moderate the effect of community values counselling on attitude change toward waste management

### **Conclusion**

It is concluded that human activities of waste disposal in waterways and drainages result to drainage blockage that is significant to increasing flood disaster. The study also concluded that community value counselling is effective in changing attitude of residents of Kontagora towards indecent waste disposal especially in waterways and drainages. The level of education of an individual in the community doesn't determine the effect of community values counselling on attitudinal change.

The counselling implication of the findings of this study is that conducting regular values counselling in the community will help in the re-orientating the children, youths and adults of the consequences of individual actions and inaction. Professional Counsellors who understand the community and national values should be equipped with the necessary facility to organize value counselling programmes to sensitize the community. These programmes have implication for disaster management. The value counselling will endeavour to orientate the resident the need for proper waste disposal as it helps in reducing man made causes of flooding and erosion in the community.

The findings also have implication for the community leaders. It is necessary the government put in place measures to help reduce to a barest minimum the menace of flooding, erosion and disease outbreaks in the community as the factors responsible to these disaster are human factors. Therefore, government organizing community value counselling programmes regularly will not abreast the citizen the attitude of proper waste disposal but it will assist in shaping the general behaviour of resident toward the management and maintenance of government properties and obedient of law and order.

### **Recommendations**

For the fact that human activities are leading contributing factors to flood disaster necessitate the need for attitude change. In light of the study findings, the study therefore recommends that:

1. Government should provide more waste disposal bins across the metropolis and increase the number of waste collection trucks to enhance effective management of waste and reduce the indiscriminate dumping of refuse.
2. Value counselling should be given to community people especially at the eve of every raining season. This will sensitize Kontagora residents the need to values healthy living.

3. Values re-orientation programmes should be organized regularly on waste management practices with reference to proper hygiene, poor practices of waste disposal, devastating effect of flood disaster and wide spread of diseases.
4. Value counselling should be provided for pupils and students in schools since many of the individuals involved in indecent waste disposal as shown in this study are children and adolescents who are found mainly in school.

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