

**Teacher's Gender, Marital Status and Attitude towards Solid Waste Management  
in Calabar Education Zone, Cross River State**

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**Abstract**

The main purpose of this study was to examine the Teacher's Gender, Marital Status and Attitude towards Solid Waste Management in Calabar Education Zone, Cross River State. To achieve the purpose of this study, two null hypotheses were formulated and tested at 0.05 level of significance. The simple random sampling technique was adopted in selecting the six communities used in the study, as well as the selection of two hundred sample used for the study. A fifteen (15) item four point likert scale questionnaire was the instrument used for the collection of data. To test the hypotheses formulated, independent T-test statistical technique was used for data analysis. The results obtained from analysis of data revealed that there is a significant relationship between Teacher's Gender, Marital Status and Attitude towards Solid Waste Management in Calabar Education Zone, Cross River State. Based on these findings, recommendation was made that male teachers should be sensitized on the need to develop more positive attitude towards solid waste management.

**Keywords:** Teacher, Attitude, Solid, Waste, Management

**Introduction**

The effective management of solid waste is one of the greatest challenges facing developing nations and the third world countries. In many Nigerian cities, there is dearth of sustained and organized system for collection, storage and hygienic disposal of solid waste, which are consistently generated from homes, markets, government offices and other commercial activities. In the last decade, waste disposal, like other national issues, has attracted a lot of attention in Nigeria. This is because disposal of

waste (domestic and industrial) has generally been haphazard. Huge loads of home refuse are usually dumped in open drains, backyards streams, along foot-paths and sometimes on open spaces or major roads (Abam, 2004).

In big cities in Nigeria, mountains of garbage are often found along major streets. It is not unusual to see loads of refuse dumped in open drains or around residential areas. It could be recalled that within the last twenty years, a situation arose where some State Governors in Nigeria had to supervise the removal of wastes from streets. The interesting thing about the incidence of waste management is the rapid cumulative increase of its generation, while a mountain load of waste is cleared today, another mountain even higher than it was before, would be noticed the following day.

According to Ogwueleke (2016), solid waste includes "refuse from households, non-hazardous solid wastes from industrial, commercial and institutional establishments (including hospitals, market wastes, yard waste, and street sweepings)". In many cases, solid waste disposal is usually contracted out and it is the responsibility of the contractors to decide the best method of disposal. In many instances, such wastes are disposed into waste bins located at designated spots in urban areas and usually collected in lorries and tippers on regular basis. These solid wastes are often transported to designated waste dumps where the wastes are managed through various processes by trained waste management officials or workers (Sally, 2011).

Attitude is a stable set of mental views and assessment about some ideas, object or person. It is an evaluation of object to indicate like or dislike towards them; or a positive or negative reaction toward a person, idea or object (Cumming, 2007). This shows that people have different assertions or perception to situations or activities. With regards to solid waste management issues, what is seen as a relief to somebody constitutes a threat to someone else. While some persons are committed towards maintaining a clean environment at all times and are willing to participate actively in the process of keeping their environment clean, others are not concerned about how the environment is managed. This attitude is not limited to a particular group of people but extends across various social classes and occupations in the society. Attitude can determine to a large extent the process of learning morals, trade and reactions to both living and non-living things. This is so because it touches the cognitive, affective and behavioural tendencies of the learner. The way an individual thinks, perceives, feels, values and acts toward the environment will definitely influence his or her contribution to solid waste disposal.

There is a strong relationship between attitude and actions, emphasizing that individuals with positive attitude will carryout positive actions while those with negative attitude will execute negative actions against any phenomenon. The main

reasons attributed to the continuous increase in the volume of refuse generated in big cities and towns have been the high level of ignorance displayed by people concerning waste disposal. Some urban dwellers even know what ought to be done, but have intentionally refused to do it, thereby increasing the burden of waste management agencies (Stahrl, 2002). The approach towards solid waste disposal and its effective management has focused more on the formulation of laws, policies, use of threats and fines, which has yielded insignificant results. Hence, the need to focus on changing the attitude and perception of people through awareness creation and persuasion has become imperative. This seems to be more effective in handling and solving environmental problems of contemporary times (Iwara, 2006).

The problem of solid waste disposal and management has remained an intractable urban problem in various regions in Nigeria. The phenomenon increases with the quantity and nature of solid wastes generated every day in Nigerian cities at an overwhelming rate. It is common to see streets overtaken by garbage and drains blocked by solid wastes (Anijah-Obi, 2002). Despite the efforts of government towards improving the environmental conditions of cities in Nigeria, effective solid waste disposal seem to have defied various solutions.

According to Abam (2004), it is reported that in the year 2000, only 12% of women were aware of the demands and processes involved in solid waste management activities as compared to 21% of men who also reported to have knowledge and capacity to participate in solid waste management processes. On the issue of willingness to participate in environmental sanitation activities, 32 percent of women reported their willingness to participate in environmental sanitation on regular basis. On the other hand, 49 percent of men also reported a strong willingness to participate actively in solid waste management in terms of environmental sanitation. Findings also revealed that only a small percentage of males and females reported low awareness about solid waste disposal and management procedures.

The issue affecting attitude towards peoples' involvement in environmental sanitation is inadequate commitment to actively participate in clean-up activities and not necessarily an issue of lack of awareness. Zurbrig (2002) stated that the situation, as widely observed where males and females have different responsibilities in terms of domestic chores, official engagements, social roles and community participation has encouraged the development of different perception, character, priorities and commitment towards the protection of the environment especially with regards to solid waste management and general sanitation and hygiene. The interaction of men and women with the environment also tends to differ significantly. Bushel (2010) in a study on gender perception and attitude towards environmental management in Kampala used a representative sample. The results gathered in this

research work revealed that men and women do not differ significantly in their attitude towards solid waste management. The findings further revealed that men and women used in the study were sufficiently knowledgeable in environmental protection and management especially with regards to environmental sanitation and hygiene. But while both males and females used in the study identified the need to constantly increase environmental awareness for increased effective action towards maintaining a clean and healthy environment at all times, there was a proportion of females who were not in support of the need to increase environmental awareness among the population. This shows variety in the level of awareness among the study respondents, which has a relationship with their perception of solid waste and its disposal and management.

Smith and Animasaun (2012) conducted a study on households' perception of public-private collaboration in solid waste management in Western Nigeria. The study was basically concerned with certain characteristics within the members of various households that could influence their perception of the need for public-private collaboration in the management of waste generated in their areas. The findings from the study revealed that among the factors that influence the perception of respondents, marital status was seen as having a positive influence. This is because an individual who is single might generate little waste and most times dispose them personally which enables him/her to participate directly in the management of the waste they generate. This group of people reported not to support the idea of public-private collaboration in waste management. The volume of waste usually generated by single people accounts for their choice of waste management strategies. Again, married couple or individuals tend to generate more waste because of the number of people usually residing in such households. The responsibility of sorting, recycling or disposing the waste they generate rest mostly with the women and girls. In most cases, married women are more concerned with waste disposal than women who are single because of the volume of waste generated by each household, which is largely determined by the number of people in each household.

Chuba (2012) asserted that it has been observed that married individuals, particularly women's perception and attitude towards solid waste disposal and management is different from that of single girls who spend most of her time outside her house of residence and pay little or no attention to her dust bin but only remembers of it the day she is welcomed home by cockroaches, rats or flies at her door post, her clothes or dishes. This could also be by an offensive odour coming from the direction of her dust bin before she will remember to dispose of her dustbin. Whereas a married woman spends most of her time in her house, the tendency of staying at home if she is not working makes her a logical choice of environmental monitor. She does this by walking round the house, overseeing if domestic chores were properly done by the

children or other people assigned to carry out such task and ensuring that the waste generated is properly and safely disposed daily. Adeniyi (2007) argued that single people generate fewer waste compared to married people.

Plummer and Slater (2009) also support that by tradition, females are expected to be mothers, home-makers, care-givers and keepers of their immediate surroundings. Women are usually required to play a vital part in domestic sanitation and hygiene on behalf of their families. Their roles are indispensable and invaluable in the attainment of the goals and objectives of environmental cleanliness and education in general. Women perform the role of washing children clothes, plates, floor and sweeping of the compound.

Ekanem (2013) stated that an individual's marital status can be seen as a crucial factor in determining the attitude of people towards solid waste management. A change in marital status can also lead to changes in an individual's responsibility and subsequent behaviour towards waste generation, disposal and management. While single people tend to generate less waste than married people, the singles also often pay less attention to the waste they generate as compared to their married counterparts. Married people are usually faced with the utmost responsibility of catering for more people especially when their children are still young. Married women are usually responsible for managing the waste generated by their entire household. The volume of waste often generated in large families increases married people's level of commitment and participation in waste disposal and management. The responsibility associated with marriage in terms of house management places a high demand on married people especially women, who are saddled with the task of keeping their homes clean.

### **Research questions**

Two research questions are posed to guide the study:

1. How does secondary school teachers' gender influence their attitude towards solid waste management?
2. How does marital status of secondary school teachers influence their attitude towards solid waste management?

### **Hypotheses**

Two hypotheses were posed to direct this study:

**Ho1:** Gender of secondary school teachers does not significantly influence their attitude towards solid waste management.

**Ho2:** Marital status of secondary school teachers does not significantly influence their attitude towards solid waste management.

## **Methodology**

The Ex-post facto research design was considered most suitable for this study. This study was carried out in Calabar Education Zone of Cross River State. The study area is located in the southern senatorial district of the state and consists of seven local government areas namely: Akamkpa, Akpabuyo, Bakassi, Biase, Calabar Municipality, Calabar south and Odukpani Local Government Areas. The population of this study consisted of all public secondary school teachers in Calabar Education Zone of Cross River State. Statistics from the State Secondary Education Board (2014) revealed that there are two thousand, two hundred and eighty two (2,282) teachers in the seventy two (72) public secondary schools in Calabar Education zone.

The sample for this study consisted of four hundred and three (403) secondary school teachers that were selected from twenty secondary schools from four local government areas in Calabar Education Zone of Cross River State. The sample comprised both male and female teachers that are still actively practicing the teaching profession. Stratified and simple random sampling techniques were adopted in this study. Stratification was based on teachers' gender. The essence of choosing stratified random sampling was to make room for heterogeneous characteristics of the population to be used for the study. The choice of the simple random sampling technique on the other hand was to ensure every member of the population was given equal opportunity of being selected for the study. The instrument considered most suitable for data collection in the study was a structured questionnaire. It was tagged Secondary School Teachers' Demographics and Attitude towards Solid Waste Management Questionnaire (SSTDASWMQ). It was divided into two parts. Part A contained demographic data of respondents which included teachers' gender, economic status, marital status, age and residential location while part B was designed using four point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). To ensure that the items selected for inclusion in the questionnaire are capable of eliciting relevant responses from respondents, the researcher presented the designed questionnaire to two experts in Test and Measurement for face validity.

The Cronbach Alpha method was used to establish reliability of the research instrument. The researcher administered fifty (50) copies of the questionnaire to secondary school teachers in two public secondary schools in Calabar Education Zone that were not part of the actual study. Only items in part B of the instrument were subjected to reliability test because items in part A of the questionnaire are constant and do not require reliability test. The researchers administered the instrument once to the respondents. The data obtained were analyzed to test for the reliability of the items in the research questionnaire. The reliability score was 0.704 which showed that the instrument was reliable enough to be used for the study. Data used for the study were obtained directly from respondents through the use of questionnaire. The statistics

used in testing the hypotheses was independent t-test. It was tested at .05 level of significance.

### **Presentation of results**

**Ho1:** Gender of secondary school teachers does not significantly influence their attitude towards solid waste management.

Independent t - test statistical tool was used for data analysis. The result of analysis as presented in Table 1 shows that the null hypothesis is rejected. This result reveals that the calculated t-value of 5.878 is higher than the critical t-value of 1.960 at 0.05 level of significance with 399 degree of freedom.

**Table 1:** Gender of secondary school teachers and attitude towards solid waste management

Variables	N	Mean	SD	Cal-t
Male	122	48.86	6.89	5.878*
Female	279	44.70	5.61	

\*Significant at 0.05; df =399; critical-t =1.960

It can also be seen that the male gender have a higher mean value (Mean = 48.86; SD = 6.89) than the female gender (Mean = 44.70; SD= 5.61). It implies that teachers' gender significantly influence their attitude towards solid waste management in Calabar Education Zone of Cross River State.

**Ho2:** Marital status of secondary school teachers does not significantly influence their attitude towards solid waste management.

Independent t-test statistical tool was used for data analysis. The result obtained from this analysis is presented in table 2. The result of analysis presented in Table 2 shows that the null hypothesis is rejected. The result obtained from analysis of data reveals that the calculated t- value of 11.527 is higher than the critical t-value of 1.960 at 0.05 level of significance with 399 degree of freedom.

**Table 2:** Marital status of secondary school teachers and attitude towards solid waste management

Variables	N	Mean	SD	Cal-t
Single	130	44.50	5.08	11.527*
Married	271	40.54	6.29	

\*Significant at 0.05; df =399; critical-t =1.960

It can also be seen that the single respondents have a higher mean value (Mean = 44.50; SD = 5.08) than the married respondents (Mean = 40.54; SD = 6.29). This implies that secondary school teachers' marital status significantly influence their attitude towards solid waste management in Calabar Education Zone of Cross River State.

### Discussion of findings

The result derived from analysis of hypothesis one formulated for the study indicated that the null hypothesis was rejected. The implication of this finding is that gender significantly influences teachers' attitude towards solid waste management in the study area. This finding agrees with the work of Zurbrig (2002) which stated that the situation, as widely observed where males and females have different responsibilities in terms of domestic chores, official engagements, social roles and community participation, has encouraged the development of different perception, character, priorities and commitment towards the protection of the environment especially with regards to solid waste management and general sanitation and hygiene. The interaction of men and women with the environment also tends to differ significantly. The continuous practice of different roles based on gender has helped in developing the attitude of people towards different social and environmental roles. This familiarity with various roles as assigned to men and women has immensely been responsible for the difference observed in the attitude of people towards the environment and its associated problems. Hence, it can be concluded that assigning various roles to men and women based on social or cultural lines has continuously created an orientation that men and women are meant to carry out different roles and tasks in the society.

The findings of Plummer and Slater (2009) also support that by tradition, females are expected to be mothers, home-makers, care-givers and keepers of their immediate surroundings. Women are usually required to play a vital part in domestic sanitation and hygiene on behalf of their families. Their roles are indispensable and valuable in the attainment of the goals and objectives of environmental cleanliness and education

in general. Women perform the role of washing children clothes, plates, floor and sweeping of the compound. These roles are considered feminine in nature and restrict men from carrying out such tasks. When children are born into families, they tend to imitate their parents and behave in similar ways as their parents. This process of socialization based on parental observation and imitation shapes the perception of growing children towards certain roles at home and in the society in general. The performance of these roles especially those related to environmental sanitation builds in the child, the expected roles assigned to them based on their gender. This consciousness contributes to subsequent attitude and behaviour towards certain concepts and issues in the society.

The result derived from analysis of hypothesis two showed that the null hypothesis was rejected. The implication of this finding is that teachers' marital status significantly influences their attitude towards solid waste management in the study area. This finding agrees with the finding of Chuba (2012) which asserted that it has been observed that married individuals particularly women's perception and attitude towards solid waste disposal and management are different from that of single girls who spend most of her time outside her house of residence and pay little or no attention to her dust bin but only remembers of it the day she is welcomed home by cockroaches, rats or flies at her door post, her clothes or dishes. This could also be by an offensive odour coming from the direction of her dust bin before she will remember to dispose of her dustbin. Whereas a married woman spends most of her time in her house, the tendency of staying at home if she is not working makes her a logical choice of environmental monitor. She does this by walking round the house, overseeing if domestic chores were properly done by the children or other people assigned to carryout such task and ensuring that the waste generated is properly and safely disposed daily. Adeniyi (2007) argued that single people generate fewer waste compared to married people.

The findings of Ekanem (2013) also supports that an individual's marital status can be seen as a crucial factor in determining the attitude of people towards solid waste management. A change in marital status can also lead to changes in an individual's responsibility and subsequent behaviour towards waste generation, disposal and management. While single people tend to generate less waste than married people, the singles also often pay less attention to the waste they generate as compared to their married counterparts. Married people are usually faced with the utmost responsibility of catering for more people especially when their children are still young. Married women are usually responsible for managing the waste generated by their entire household. The volume of waste often generated in large families increases married people's level of commitment and participation in waste disposal and management. The responsibility associated with marriage in terms of house management places a

high demand on married people especially women, who are saddled with the task of keeping their homes clean.

### **Conclusion**

The essence of this study was to examine the Teacher's Gender, Marital Status and Attitude towards Solid Waste Management in Calabar Education Zone of Cross River State. From findings obtained from analysis of data, it could be concluded that if teachers, both male and female, married and unmarried, have positive perceptions towards wastes, management strategies shall be upheld. Thus proper or sustainable waste management by teachers is dependent on their rightful attitude towards waste.

### **Recommendations**

Based on the findings obtained from analysis of data and testing of hypotheses in the study, the researchers made the following recommendations:

- i. Male teachers should be sensitized on the need to develop more positive attitude towards solid waste management because their attitude towards solid waste showed a higher mean value than that of their female counterparts.
- ii. Single teachers tend to have less positive attitude towards solid waste management than their married counterparts in the study area. Efforts should be made to encourage them to change their perception and attitude towards solid waste management using sensitization workshops, seminars or conferences in order to achieve this goal.
- iii. Environmental sanitation departments at the local government level should ensure that attitude of people towards solid waste management are properly guided through formulation and implementation of relevant rules and regulations in order to address the influence of residential location on attitude of teachers towards solid waste management in the study area.

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