

Community Participation, Waste Facilities and Solid Waste Management in Uganda. A Case Study of Gulu District

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Research Article

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ABSTRACT

The study focused on community participation with; waste facilities and solid waste management in Uganda, considering a case study of Gulu district. The study sought to establish the level of community participation in solid waste management in Uganda and assess the strategies available in it, together with relevant relationships involved. The study employed a cross-sectional research design with a mixed method approach. 359 individuals were to be interviewed, however, 37 did not respond to the exercise hence only 322 individuals responded who included. This made the response rate to be 90% which therefore implies that the study suffered from a nonresponse bias of only 10% which has a low significance on the study. Primary sources of data were used and data was collected using questionnaires. Respondents were not willing to provide data through interviews and therefore data was collected mostly through questionnaires. The Uni-variate analysis including frequency tables, charts and bivariate analysis including Pearson's rank correlation, Chi-square tests and Regression Analysis were used to analyze the collected data. The study findings revealed that there is a significant positive relationship between community participation and a combination of waste facilities and solid waste management in Gulu district. It was concluded that, community participation in Gulu District is significantly influenced by waste facilities and solid waste management in Gulu district.

INTRODUCTION

Public health is based on the notion that ‘the truths of science will be used to benefit everyone’. It addresses health at population level. Public health includes: assessment and monitoring of the health of communities and populations at risk; and formulation of public policies to promote health, prevent disease, provide access to appropriate and cost-effective care, and evaluate the effectiveness of care. The scope of public health has shifted from a traditional focus on disease eradication, surveillance, screening, sanitation and treatment. It now covers new social and environmental determinants of health, as well as risks across national borders, including preparedness for global pandemics, health effects of trade, bioterrorism and trans-border movement of hazardous substances. Public health draws on four principles and approaches: Prevention is prioritized. This includes: primary prevention of disease and disability (e.g. Immunization), secondary prevention for early detection of problems (e.g. screening for sexually transmitted diseases or tuberculosis); and tertiary prevention to limit disease impacts (e.g. investigating food-borne outbreaks). Direct involvement of communities in health action is promoted, such as the promotion of youth reproductive health. Actions are chosen that have widest collective gain. Hence, measures that reduce collective exposure to water borne disease through provision of safe water are preferred to treating individuals for water borne diseases and Methods for investigating the distribution and determinants of disease at community level (i.e. epidemiology) are used to identify causes and plan intervention.

Since waste management is a public health issue, Local government’s waste management interacts with city planning fundamentally from the source of waste generation: people and built environment. City planners’ involvement in waste management, however, has been largely limited to the environmental field, with a focus on facility sitting in particular. In other words, waste management is commonly perceived as the “end-of-pipe” of socioeconomic activities. Thus, current waste management programs have focused on disposal of the waste generated, instead of examining the sources.

MATERIALS AND METHODS

This study used a case study and descriptive design that employed both qualitative and quantitative approaches. The qualitative approach was desired for this study for in-depth data collection and analysis, and accommodates probing for in-depth exploration of perceptions, feelings and attitude of the target respondents through interviews. Quantitative approach employ numerical representation was useful for background information of the respondents that are always tabulated. The quantitative aspect elicited numerical representation of respondents and their views on the research subject to minimize errors related with generalization. According to the Gulu district council score card report 2012/2013, the study population consisted of 05 District executives, 16 district technical staff and 407,500 community members [1]. The total study population will be 407,521. The sample size of the study was determined using statistical tables of Morgan and Krejcie (1970). A sample of 359 respondents was chosen from a population of 407,521. The sample size as derived from the various categories of respondents is summarized in the Table 1 below.

Table 1: Sample size determination.

Category of respondents	Population	Sample	Sampling technique
District executive members	5	5	Purposive
Technical staff	16	14	purposive
Community members	407500	340	Simple random
Total study population	407521	359	

In this study, purposive and simple random sampling techniques were used in the table above. Purposive sampling technique, also called judgment sampling, is the deliberate choice of an informant due to the qualities the informant possesses. It is a non-random technique that does not need underlying theories or a set number of informants state that purposive sampling enables the researcher pick a sample based on own judgment. Purposive sampling enables the researcher to pick the element found fit to avail the required data. Simple random sampling is a method used to cull a smaller sample size from a larger population and use it to research and make generalizations about the larger group,. With a simple random sample, every member of the larger population has an equal chance of being selected. Data was collected through the Survey, interviews and document review. A survey was conducted to collect primary data by use of questionnaires which were both close and open ended. Kothari (2004) terms the questionnaire as the most appropriate instrument due to its ability to collect a large amount of information in a reasonably quick span of time and economical manner.

Closed questions were deployed to capture data in a consistent manner. This is because Close-ended questions can be more specific, thus more likely to communicate similar meanings and questions to the respondents. In addition to the two sources of information above, the researcher reviewed existing documents related to the study problem and variables in form of reports, published and unpublished research, journals, electronic journals, websites and databases to gain more information on the study problem. Sekaran (2003) classifies these documents as secondary sources of data and asserts that this method saves time and reduces the cost of gathering information.

Data analysis

According to Sekaran, data analysis is the evaluation of data. It is the process of systematically applying statistical and logical techniques to describe, summarize and compare data. Descriptive analyses of frequencies, percentages, means and modes were used Relationships and variations among variables were determined by using cross tabulations chi-square, and two sample T-tests. Cross tabulations comparing rows and columns were used. One sample T-test at 95% confidence interval was used (Test Value=0) to rank different variables. The higher the T-value, the higher the rank.

RESULTS

A total of 359 questionnaires were distributed to the 359 respondents where a total of 322 questionnaires were returned hence making a response rate of 90%.Majority of the respondents were females comprising of 62.3% while the males were 37.7%. Most of the respondents belonged to the ‘30 Years Plus’ age bracket and of which

most of them in this age-bracket were females (49%). It further shows more females have higher desire for sanitary activities which includes waste management.

Level of community participation in solid waste management in Uganda

The first objective contained nine questions on the level of community participation in solid waste management in Uganda.

Item (a) awareness of waste management: Required respondents to respond to whether they are aware of waste management context. It resulted into the majority (79.7%) of the individuals were aware of the context of waste management and on the other hand 20.3% of the individuals are not aware of the concept. This put more attribute to lime light about the topic at hand and it gave a clearer insight on the discussion.

Item (b) do you participate in waste management: Required individuals to respond as to whether they actually participate in waste management, which turned out to be like most of them (36.1%) sometimes participate, and 35.5% of the individuals actually participate in waste management and only 28.4% do not actually participate in waste management. This implied that the chances of existence of waste management in Uganda is possible to be existing.

Item (c) frequency of sensitization on waste management: Purposely intended to find out the frequency of sensitization on waste management and majority (48.6%) of the respondents were oftenly sensitized, followed by 29.2% who were less oftenly sensitized and last 22.2% were not sensitized. This item emphasized the fact that there is actually some sensitization in Uganda. Individuals were further required to identify the sources of information used in their sensitization and below is the categorised response majority of the respondents (25.2%) about a quarter of the sample get this information through seminars. Followed by individuals (22.4%) whose information is sourced through either a radio or a TV. 21.7% of the sample did not respond to that, and 15.5% of the respondents get this awareness through political gatherings and lastly 15.2% learn the waste management from workshops.

Item (d) Attitude of community towards solid waste management: Intended to find out the general attitude of community towards solid waste management. Majority (42.3%) of the respondents actually believed that there was positive attitude of the community towards solid waste management, followed by 32.7% of the respondents who did not believe positivity or negativity in community's attitude towards solid waste management and finally only 25% of the respondents actually believed that the community has a negative attitude towards solid waste management in Gulu district. This implied that at least a quarter of the people believed that there was some negative attitude that needed to be found out in Uganda [3].

Item (e) Amount of waste generated per day: Intendent to require respondents to avail opinions about the amount of waste they dispose off per day. This was measured in terms of buckets. Majority of the respondents (43.7%) generate more than a bucket per day, while 33% generate less than a bucket per day and only 23% generate one bucket per day. This implied that the majority of the Ugandan households generated more than a bucket in a day. The bigger question at the back of one's mind would be, how is that waste held, is there any profitability in its disposal?

Item (f) Paying for garbage removal: Required respondents to give their confirmation about whether they actually pay to dispose off their generated waste. It was found out that majority (56.4%), though slightly above a half of the respondents actually pay for the garbage to be removed or disposed off, while 43.6% of the respondents did not pay for their rubbish disposal. This implied in the further insight of community participation in waste management in

Uganda, there would be income generating activity processes at an extensive scope than the community would imagine. Further more, for those respondents who actually pay for the disposal of their waste, were required to indicate the amount they pay and it turned out to be that on average, UGX 928 only. This is roughly \$0.25 (a quarter a dollar) per month. This implied that the monetary attraction in waste disposal process would really be profitable if put in right terms and perspective.

Item (g) in your observation, who is responsible for waste management: Required that respondents give opinions about who they believe who was responsible for waste management in their community. Most of the respondents, actually more than a half (55.2%) believe that the council of the municipality is responsible for waste management, then followed by 35.8% of the respondents actually believed that was the residents who are responsible for their own waste management. However, the other 4.5% of the individuals in Gulu believe that (Non Government Organisations) NGOs and another 4.5% believe that it is the Health Inspectors. This magnifies that most of the people in Uganda actually believe in the council to manage waste in their community.

In conclusion, it was therefore confirmed that majority of the respondents were aware and they sometimes participate in waste management. This is in regards to the fact that they are oftenly sensitized with a positive support and attitude of the community towards waste management in Gulu District.

Strategies used in solid waste management by local governments in Uganda

The details below interrogate the empirical results through advanced statistical tests to demonstrate the views of the respondents on how they assess the strategies used in solid waste management by local governments in Uganda. The details are supported by interviews results:

Item (a) What type of waste do you mostly dispose: Required respondents to respond to identify the most type of waste they normally generate and it turned into the majority (86.9%) of the individuals dispose off vegetable/organic waste, followed by 7.7% of the respondents dispose off recyclable waste, then 3.2% of the respondents who mostly dispose off textiles waste, then 1.9% hold off hazardous waste and finally 0.3% of the respondents mostly dispose off liquid waste. This put a considerable indication to confirm that majority of the people's activities may be in vegetable/organic and textiles in the respective areas in Gulu District.

Item (b); How often do the MSEs collect solid wastes from your house: This item required respondents to confirm the number of times, the SMEs collect waste from their respective homes. To most of the individuals' (53.4%) waste is collected on a monthly basis, followed by those individuals (21.9%) whose waste is collected on a weekly basis, then 13.2% of the waste of individuals waste is collected quarterly and finally, 11.4% of the individuals' waste is collected twice a year. On the other hand, the waste collection, majorly depended on the activity conducted by the respondents, in that nurses, civil servants and social workers mainly their rubbish was always collected weekly, all (100%) house wives collected their rubbish on a monthly basis.

Item (c); My community emphasizes the issue of solid waste management: This item required individuals to give their level of agreement in regards to community emphasis towards solid waste management. Most of the individuals (39.5%) of the individuals agreed, followed by 28.6% who disagreed, then 19% of the individuals strongly agreed and finally 12.9% of the individuals were neutral, that is they neither agreed nor disagreed to the fact that the community emphasizes the issue of solid waste management [4].

Item (d); Am currently satisfied with the solid waste management in my community: This item required respondents to give their level of agreement on whether they were satisfied with the solid waste management in their respective communities. Mostly (50.8%) of the individuals agreed to the statement, followed by 26.3% of the individuals who

disagreed and finally 22.9% of the individuals were neutral about their level of agreement. Non of the individuals strongly disagreed to the fact that they were, then satisfied with the solid waste management in their respective community.

Item (e); My community emphasizes separating different types of waste: This item required that individuals avail their level of agreement to the fact that their respective communities emphasizes separating different types of waste. Majority of the respondents (48.7%) were in agreement to the assertion, followed by 31.8% of the individuals who disagreed to the statement, and finally only 19.5% of the individuals were neutral about the statement. Neither of the respondents strongly disagreed nor strongly agreed to the fact that their respective communities empahisez the issue of separating different types of waste.

Item (f); Waste is all over the places such as roads, markets and drainages: This item required respondents to give their level of agreement towards whether the waste is all over the place and it came out to be like 66% of the respondents agreed to that assertion, 16.8% were neutral, and finally 16.5% of the individuals strongly disagreed to whether the waste was all over the places such as roads, markets and drainages of different places of Gulu district.

Item (g); what is the most time do you prefer to dispose your household wastes: This item required respondents to assert their most preferred period of disposing off the house hold waste. Most preferences were in morning hours with 45.3% of the respondents affirming to that, followed by 19.6% who preferred noon hours, then 17.9% really preferred the evening hours and finally only 17.2% actually preferred night time.

In conclusion, it was therefore confirmed that majority of the respondents dispose vegetable waste, and they dispose it on a monthly basis. The very individuals agreed to only that their respective communities emphasizes the issue of soild waste management, but also they are currently satisfied with the soild waste management as the community emphasizes separation of the different types of waste and they normally dispose it off in the morning hours. Regardless of those preceeding facts, waste was agreeable allover the place such as roads, markets and drainages.

The relationship between community participation and solid waste management in local governments

The third objective considers from both community participation and solid waste management in order to discover the relationship between community participation and solid waste management in local governments. As the questions are summarized in objectives (one and two) above, below is the study relationship of the study findings.

Table 2: Bivariate analysis to the research objective three.

Correlations between community participation and solid waste management in Gulu District		Community emphasizes the solid waste management	Waste management participation
Community emphasizes the solid waste management	Pearson correlation	1	-0.088
	Sig. (2-tailed)		0.148
	N	294	269
Waste management participation	Pearson correlation	-0.088	1
	Sig. (2-tailed)	0.148	

	N	269	296
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The Table 2 shows the summary statistics of the bivariate analysis between community participation and solid waste management in Gulu District. The above findings produced a Pearson correlation coefficient $-.088$ community participation with waste management, hence confirming that that was a negative weak relationship between community participation and solid waste management. To confirm the significance of the above identified relationship, between community participation and solid waste management in Gulu District, a chi-square test was conducted between the variables and therefore, findings were as below: The Table 3 shows the summary statistics of the Chi-Square analysis, between community participation and solid waste management in Gulu District.

Table 3: Chi-Square Tests between community participation and solid waste management.

Chi-Square Tests between community participation and solid waste management			
	Value	df	Asymptotic significance (2-sided)
Pearson Chi-Square	72.333 ^a	6	0
Likelihood Ratio	93.103	6	0
Linear-by-linear association	2.097	1	0.148
N of valid cases	269		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.02.			

From the table above, the chi-square analysis , between community participation and solid waste management in Gulu District reported a P value of 0.000 which was less than 0.05 (5%) level of significance hence we confirmed that the above relationship between community participation and solid waste management in Gulu District was significant. In response to research objective three which related to the relationship between community participation and solid waste management in local governments, the measurement above implied that there is a low-negative-significant relationship between the two variables.

The relationship between community participation, waste facilities and solid waste management in local government

The third objective contains questions that have been identified in both; Community participation in objective one, solid waste management objective two, furthermore, there were five major questions on waste facilities and their summary results are in Table 4.

Table 4: Summary results on waste facilities.

Question	Category of question	Count of response	Percentage count	Modal Response-Score
Have a waste storage facility in your home?	Yes	270	0.888	Yes
	No	34	0.112	

My community emphasizes owning waste facilities in homes	Strongly Disagree	31	0.106	Agree
	Disagree	25	0.086	
	Neutral	72	0.247	
	Agree	99	0.339	
	Strongly Agree	65	0.223	
In my community, dumping is controlled	Strongly Disagree	0	0	Agree
	Disagree	72	0.255	
	Neutral	31	0.11	
	Agree	179	0.635	
	Strongly Agree	0	0	
My community has sanitary landfills where waste is disposed off	Strongly Disagree	13	0.044	Agree
	Disagree	1	0.003	
	Neutral	58	0.195	
	Agree	182	0.613	
	Strongly Agree	43	0.145	
I take chance to advice people that throw rubbish anyhow in public places not to do so	Strongly Disagree	26	0.086	Neutral
	Disagree	30	0.099	
	Neutral	114	0.375	
	Agree	77	0.253	
	Strongly Agree	57	0.188	

Some statements in these questions were rated on the 5-point Likert value scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. The details below interrogate the empirical results through advanced statistical tests to demonstrate the views of the respondents on how they assess the strategies used in solid waste management by local governments in Uganda. The details are supported by interviews results:

Item (a) Have a waste storage facility in your home: Required respondents to respond to whether they have a waste storage facility in their homes and it resulted into that the majority (88.8%) of the individuals claimed to have had waste facilities in their home steads and on the other hand, only 11.2% of the individuals did not have waste facilities. This put a considerable indication to confirm that majority of the people are aware of of the context of waste management in Gulu Distirct. Further more, for those respondents who affirmed to the fact that they have waste storage facilities, were aske to specify the type of facilities that they claim to have. Below is the summary findings for the types of facilities: 50% (127) of the respondents have rubbish pits as the tyoe of waste facility in their homes, followed by 26% (68) of the individuals who have sacks as their tool of waste storage, then only 13% (33) have baskets as their facility and lastly only 11% (28) use plastic bags. It so turned out to be that most of the individuals who use plastic bags are either nurses or traders for occupation and on the other hand it is the farmers and house wives who mostly use the rubbish pits. Furthermore, research showed that all of the individuals (100%) who use plastic bags actually generate more than one bucket. This is presumably significant for it will require one to do a daily disposal since the plastic itself is also a waste [5].

Item (b), my community emphasizes owning waste facilities in homes: Required respondents to give their opinion on whether their respective communities emphasize owning waste facilities in homes. Most of the respondents

(33.9%) agreed to the attribute, followed by 22.3% of the individuals who actually strongly agreed to the statement. 24.7% of the respondents neither agreed nor disagreed to the statement hence neutral, and lastly on 10.6% of the respondents strongly disagreed the fact that their communities emphasizes owning waste facilities. This implies that it arguable agreeable that the community generally emphasizes individuals to own waste facilities.

In item (c), In my community, dumping is controlled: Respondents were asked of their opinion whether dumping is controlled is controlled in their community. Neither of the respondents strongly agreed nor strongly disagreed to the statement, however, mostly (63.5%) of the respondents just agreed to the statement, followed by 25.5% of the individuals who also just disagreed and finally only 11.0% of the respondents stayed neutral with the fact that dumping is controlled in the community. This could be a sign of hesitation to confirm the characteristics of dumping in Gulu district due to failure for individuals to give an extreme opinion “strongly.”

In item (d), my community has sanitary landfills where waste is disposed off: Since this waste is removed off from individuals' homes and dropped to any designated areas, respondents were inquired on whether they are aware that their community has sanitary landfills where waste is disposed of. Majority of the respondents (75.8%) just and also strongly agreed to the statement, followed by 19.5% of the individuals neither agreed nor disagreed and lastly only 4.7% of the individuals who just and strongly disagreed to the fact that their communities have sanitary landfills to where disposal is managed. The general agreement to the statement in question confirms the presence of awareness, participation and a positive attitude of the community towards waste management.

Item (e) I take chance to advise people that throw rubbish anyhow in public places not to do so: Required residents to confirm whether they take chances to advise people who throw rubbish anyhow in public places to not to do so. Majority (37.5%) of the respondents were neutral, that is they were neither disagreement nor agreement to the statement, 25.3% of the individuals agreed and 18.8% of the respondents strongly agreed to the statement followed by, 9.9% of the individuals disagreed to the statement and lastly only 8.6% of the individuals actually strongly disagreed to taking chance to advise people who throw rubbish anyhow. This reflects onto an earlier finding of the councils' responsibility to manage waste. One would actually believe that it is also their responsibility to advise people on dumping anyhow in Gulu District.

Item (f) why is waste found all over the places such as roads, markets and drainages: Required respondents to give their opinions on why waste would be found all over the place such as roads, markets and drainages. Below are the summary findings for different responses to the interview question. Majority (18.9%) of the respondents claimed that it was the poor policies in place that are meant to curb such indiscipline, followed by 16.1% of those who put it dwellers' ignorance of the harm it can cause, and the n 8.4% believe it is poor sensitization, 5.6% actually believe that the community lacks an operational emblem that would actually bring working together in order to curb general issues like waste management and finally the last part of the group of individuals believe it is all the dwellers' adamancy to adjust to changes. This summary finding assist in pointing out that Gulu district needs to work on policy making and more thorough sensitization as the more urgent programs to curb any waste management related challenges. In conclusion, it was therefore confirmed that majority of the respondents have waste storage facilities in their respective homes, agreed that the community emphasizes ownership of waste facilities in those homes, and the very individuals agreed that dumping is controlled in their communities. It is also true that it is mostly believed for the respective communities to own sanitary landfills, however majority of the people do not take part in the advising people who litter anyhow. They tend to believe that it is the community's obligation to do so, as it was found out in the earlier objective (one).

Regression analysis for community participation, waste facilities and solid waste management in local government

The Table 5 shows the summary statistics of the multi-regression analysis community participation as a function of waste facilities and solid waste management in local government.

Table 5: Table of the model summary.

Model	R	R Square	Adjusted R square	Std. error of the estimate	Change statistics				
					R square change	F change	df1	df2	Sig. F change
1	.558 ^a	0.312	0.306	0.675	0.312	53.931	2	238	0

a. Predictors: (Constant), waste facilities, solid waste management

Table 6: Table of the model coefficients.

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	95.0% confidence interval for B	
	B	Std. error	Beta			Lower bound	Upper bound
Constant	3.218	0.174		18.442	0	2.874	3.561
Solid waste management	0.002	0.04	0.003	0.056	0.955	-0.076	0.081
Waste facilities	-0.362	0.035	-0.559	-10.248	0	-0.431	-0.292

a. Dependent variable: Community participation.

Dependent Variable: Community Participation

Predictors: (Constant), (constant), waste facilities, solid waste management

R: Represents the coefficient of correlation.

R²: Represents the coefficient of determination.

Equation 1: Community participation as a function of the Solid Waste Management and Waste Facilities Community Participation = 3.218 + 0.002 (Solid Waste Management) - 0.362 (Waste Facilities) + ε

From the above equation, a single improvement in Solid Waste Management improves Community Participation by 0.2% and a single change/substitution in the waste facilities resulted into an improvement in Community Participation by 36.2%.

Since the overall p-value Sig. F Change is equal to 0.000, which is less than 0.05, we therefore concluded that adjustment of Community Participation significantly depended on Solid Waste Management, Waste Facilities in communities.

The coefficient of determination (R squared) value was .312; this implied that both Solid Waste Management and Waste Facilities in communities explained only 31.2% of Community Participation in waste management.

In response to the study objective, the results of the test stated that there was a significant positive relationship between Community Participation and Solid Waste Management with Waste Facilities in communities of Gulu district.

DISCUSSION

There is agreement to community participation in solid waste management in Uganda

The often sensitization and awareness is in line with the definition of that defined participation as a means to educate citizens and to increase their competence. Ultimately this implies that the frequent sensitizations were achieved. The existence of social workers in the area was also in agreement to the assertion by (Bens, 1994) that; internationally, resources for social welfare services are shrinking. Population pressures, changing priorities, economic competition, and demands for greater effectiveness are all affecting the course of social welfare.

The assessment of the strategies used in solid waste management by local governments in Uganda

The study revealed that most of the respondents, actually more than a half (55.2%) believe that the council of the municipality is responsible for waste management. This is in full agreement with (Baud et al. 2001 cited in Ahmed and Ali 2004). Solid waste management practices in developed countries progressed from 'no-system' to an increasingly centralized 'municipal system'. The classical approach to solid waste management, considers solid waste management as an 'urban planning' problem or a public health issue. According to this approach, the municipal authorities are the main actors in the field (Baud et al. 2001 cited in Ahmed and Ali 2004). The same model was followed by the developing countries and it is deemed that the responsibility for managing solid waste primarily rests with the municipal authorities. Since Uganda is a developing country, the assertion in this case holds.

Community participation significantly relates with solid waste management in local governments

Since the Pearson Correlation Coefficient of -0.088 was less than zero (0) and greater than -0.5, this implied a low negative relationship between community participation and solid waste management. The significance of this relationship was tested and the Pearson's chi-square coefficient was 0.000 which implied a significant relationship. Findings came into agreement with who asserted that community-based solid waste management projects are activities carried out by members of the community. This implies that the community participation influences solid waste management, no doubt about that. Furthermore, the negative relationship in the study findings is in extreme agreement with who put it that; the community as a whole can exercise power through participation and empowerment but without any negative effects upon the powerful. They can help themselves in the development and gain tools for self-reliance. But if power is conceptualized in zero terms empowerment has a negative impact. Increase in power of a certain group may lead to the decrease in power of the other group.

Community participation significantly relates with waste facilities and solid waste management in local governments

Findings from the regression equation asserted that; a single improvement in Solid Waste Management improves Community Participation by 0.2% and a single change/substitution in the waste facilities resulted into an improvement in Community Participation by 36.2%. This is in full agreement with who attributed that; conditions vary; therefore, procedures must also vary accordingly to ensure that these conditions can be successfully met. Waste management systems must remain flexible in light of changing economic, environmental and social conditions. Furthermore, the interrelated variables in the derived regression model was in agreement with who pointed out that; in most cases, waste management is carried out by a number of processes, many of which are closely interrelated; therefore it is logical to design holistic waste management systems, rather than alternative and competing options, and there is no doubt about that.

CONCLUSION

The study conclusions were drawn basing on the different research objectives and findings as shown below;

There is agreement to community participation in solid waste management in Uganda

The agreement towards the frequent sensitization of individuals about waste management has upheld their awareness of the program, the belief about the community's positive attitude portrays a sign of harmony, the modal amount of waste generated by individuals (more than a bucket a day) is really deemed much enough to draw one's attention to find all possible ways of handling it as per. whose perception about solid waste management is as follows; Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity and the process is generally undertaken to reduce their effect on health and the environment. All this assertion puts into agreement of the object case in point.

The assessment of the strategies used in solid waste management by local governments in Uganda

The level of agreement to; the communities' emphasis towards the issue of solid waste management, emphasis towards separating different types of waste. Other indicators like early morning preference to dispose off waste, prevailing satisfactions with the solid waste management in communities. All these indicators are in general agreement onto their respective assertion.

Community participation significantly relates with solid waste management in local governments

The significant negative relationship between community participation and the solid waste management in local governments indicate that a single substitution or tilting of the solid waste management mechanism improves community participation in local governments to a significant or commendable extent with a 95% level of confidence.

Community participation significantly relates with waste facilities and solid waste management in local governments

The significant positive relationship between community participation and the combination of both waste facilities and solid waste management in local governments indicates that the more the waste facilities and solid waste management are improved combined, the better the community participation.

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