

ATTITUDE TOWARDS SOLID WASTE MANAGEMENT AMONG THE RESIDENTS OF KAWEMPE A VILLAGE, WAKISO DISTRICT. A CROSS-SECTIONAL STUDY

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Abstract

Background

It is estimated that 70-80% of the MSW generated in Africa is recyclable, yet 4% is currently recycled. The aim of the study is to assess the attitude towards Solid Waste Management Among the Residents of Kawempe A Village, Wakiso District.

Methodology

A descriptive cross-sectional study design. A simple random sampling technique was used where each person in the population had an equal chance of being selected. Data was analyzed manually and presented in tables, graphs, and pie charts using Microsoft Excel.

Results

Most of the respondents (32%) were Protestants whereas the least (18%) belonged to other religions like Born Again, Adventists, Jehovah's Witnesses etcetera. Almost all of the respondents (96%) agreed that solid waste is one of the environmental problems of the community which requires immediate attention by the government, the majority (56%) reported "No" to reducing, reusing, and recycling wastes being appropriate. The majority (66%) strongly disagreed that they never felt comfortable about the way solid waste is managed in the community, Most (42%) thought that the government is responsible for solid waste management in their community, majority (68%) never bothered to know where waste was taken for disposal after collection, more than half of the respondents (72%) agreed that proper waste management promoted environmental and human wellbeing.

Conclusion

The attitudes towards solid waste management were good in the view that most respondents agreed that solid waste is one of the environmental problems of the community that requires immediate attention by the government and the community.

Recommendations

Municipal medical officers should initiate massive sensitization and health education campaigns in the community to improve the knowledge, attitudes, and practices of the residents about solid waste management.

Keywords: Attitude towards Solid Waste Management, Solid Waste Management among Residents, Kawempe A Village.

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Background

The composition of waste generated in Africa is generally made up of 13% plastic and 57% organic state, while glass and metal waste with 4% each (UNEP, 2018). It is estimated that 70-80% of the MSW generated in Africa is recyclable, yet 4% is currently recycled also, 125 million tons per annum of MSW was generated in 2012, of which 81 million tons were from sub-Saharan Africa. This is expected to grow to 244 million tonnes per year by 2025. The average MSW collection rate in sub-Saharan Africa is lower at only 44% (Linda et al, 2019). According to the World Bank, middle and low-income countries generate 53% and 57% of food and green waste respectively. In low-income countries materials that could be recycled account for only 20% of the waste stream. In global waste

composition, food and green (44%), glass (5%), metal (4%) plastic (12%), paper and cardboard (17%), rubber and leather (2%), wood (2%), others (14%). Waste collection is door-to-door for households at a predetermined frequency. In certain localities, communities may dispose of waste in a central container or collection point where it is picked up by the municipality and transported to the final disposal sites (Kaza et al, 2018).

In the Kitebere landing site, majority 74.7% of the participants reported that it's the responsibility of the government to manage waste in the community implying that the majority of the people relied on the government to manage waste in the community. This was followed by 13.7% of the participants who reported that they thought it was the resident 's responsibility to manage waste in the

community. It was further revealed that about 10.5% of the participants thought that it's the responsibility of NGOs to manage waste in the community. However, 1.1% of the participants reported that they did not know who was responsible for waste management in the community (Opio, 2021). In Kano state, Nigeria, more than half (53.4%) of the respondents disagreed (37.8% disagreed; 15.6% strongly agreed) that the modern and local methods of waste disposal are the same and about 73.3% agreed that the local method of waste disposal is more preferable than modern method. Close to eight-tenths (77.8%) of the respondents agreed that the preference for the local method is because it is cheaper and simpler and 75.5% have also agreed that the local method is rejected because it increases disease spread, blocks drainages, and causes a nuisance to the community (Abuhuraira et al, 2021).

In Kenya, residents were asked if they bother to know where waste is taken for disposal after collection. The majority of the residents (63.6%) indicated that they have never bothered which is an indicator of their negative attitude since they did not find it their responsibility to collect and dispose of the waste (Mbiro et al, 2020). In Nigeria revealed that (47.8%) of the respondents strongly agreed that proper waste management promotes environmental and human well-being. (47.4%) of the respondents strongly agreed that they feel embarrassed to throw waste anywhere. (38.3%) of the respondents agreed that proper waste management minimizes cost (Oladejo & Amosu, 2016). The study aims to assess the attitude towards Solid Waste Management Among the Residents of Kawempe A Village, Wakiso District.

Methodology

Study design

This employed a descriptive cross-sectional study design with the aim of quantifying the distribution of certain variables in a study population at one point in time. This study design helped the researcher to systematically collect and analyze the data to give a clear picture of the problem at hand.

Study setting

The study was carried out in Kawempe A village, Nansana Municipality, Wakiso district in central Uganda, Uganda, East Africa, Africa. Kawempe A village is located along Bombo Road. Kawempe A village is a neighborhood within Kampala, the capital and largest city in Uganda. Katalemwa is situated 31/2 km southwest of Kawempe A village, Lusanja village

3km northeast, Wamala village is situated 3km west, Kawanda is situated 4km north Kawempe A village, Mpererwe suburb, 31/2 km south. Kawempe A village is situated close to the villages Jinja Kaloli, Kisimu Katooke, and Lugoba with an estimated population number of 50,000 people. The study was carried out from March 2023 to November 2023. The time was chosen because the research would be able to be accomplished in that period of time.

Study population

The study population was the adults living in Kawempe A village, that were present during the period of data collection.

Sample size determination

The sample size was determined by using the standard formula of $N = Z^2 PQ / e^2$

Where;

N=Sample size

Z=Standard normal distribution at 96% interval=1.96

P=Proportion of population with characteristics under study

Q=Proportion of population without characteristics under study

e=Standard acceptable error which is estimated which is estimated to be between 0.01-0.05 $N = (1.96)^2 * 0.5 * 0.5 / (0.01)^2$

=383.3

The sample was 383 but due to limitations in money and time, only 50 respondents were used.

Sampling technique

A simple random sampling technique was used where each person in the population had an equal chance of being selected.

Data collection

The study utilized one research instrument for collecting data and that was the questionnaire.

Data collection tools

A questionnaire with closed-ended questions was employed in the study in order to solve the research problem, this tool was considered because it was quick, simple, and saved time and money.

Data collection procedure

The researcher sought consent from the respondents and explained to them what the research was all about. The researcher personally collected data by administering the questionnaire to respondents and gave a reasonable amount of time to them to give in their views and responses after which the questionnaire was collected. Strict confidentiality to all information received was assured before interviewing.

Study variables

The independent variable

The attitude of the people towards solid waste management

The dependent variables

Solid waste management

Quality control

The quality control of the research was assured through,

Piloting the study

The study was piloted one month before the large-scale data collection. This involved the researcher randomly picking 5 respondents in Jinja-Kaloli to answer questions from the questionnaire. The purpose of piloting was to determine the feasibility of the study and identify weaknesses in the study.

Training of the research assistants

The researcher trained his assistants by holding discussions before the data collection procedure commenced.

Data analysis and presentation

Data was analyzed manually and presented in tables, graphs, and pie charts using Microsoft Excel.

This was because it was a quantitative approach.

Ethical consideration

The research proposal was submitted to the school librarian at KSHS. An introductory letter was obtained from the principal's office. The introductory letter was then taken to the local council of Kawempe A village to gain permission to carry out data collection. Consent forms were filled out by the respondents after explaining the purpose of the study to them. All respondents were assured of confidentiality for their views as no name was to appear on the questionnaire. No participant was forced to participate in the study.

Results

Demographic data

Table 1: Shows the distribution of respondents by their social demographic characteristics (N=50)

Variable	Frequency (f)	Percentage (%)
Age (years)		
18-23	9	18
24-29	10	20
30-35	11	22
40 and above	20	40
Total	50	100
Level of education		
Never went to school	6	12
Primary	23	46
Secondary	13	26
Tertiary institution	8	16
Total	50	100
Marital status		
Single	9	18
Married	24	48
Separated	14	28
Widow	3	6
Total	50	100
Religion		
Protestant	16	32
Catholic	14	28
Muslim	11	22
Others	9	18
Total	50	100
Tribe		
Muganda	28	56
Munyankole	5	10
Musoga	7	14
Others	10	20
Total	50	100

Occupation		
Unemployed	18	36
Employed	12	24
Self-employed	20	40
Total	50	100

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Table 1, most of the respondents (40%) were from the age group of 40 and above years whereas the least (18%) belonged to the cohort of 18-23 years. About the level of education attained, most of the respondents (46%) had reached primary whereas the least (12%) never went to school. Regarding marital status, most of the respondents (48%) were married whereas the least (6%) were widows. Concerning religion, most of the respondents (32%) were Protestants whereas the least (18%) belonged to other religions like Born Again, Adventists, Jehovah's

Witnesses etcetera. Regarding tribe, more than half of the respondents (56%) were Baganda while the least (10%) belonged to the Banyankole. In regards to occupation, most of the respondents (40%) were self-employed whereas the least (24%) were employed by others.

Attitude towards solid waste management among the residents

Figure 1: Distribution of respondents according to whether they thought that solid waste is one of the community environmental problems that require immediate attention by the government (N=50)

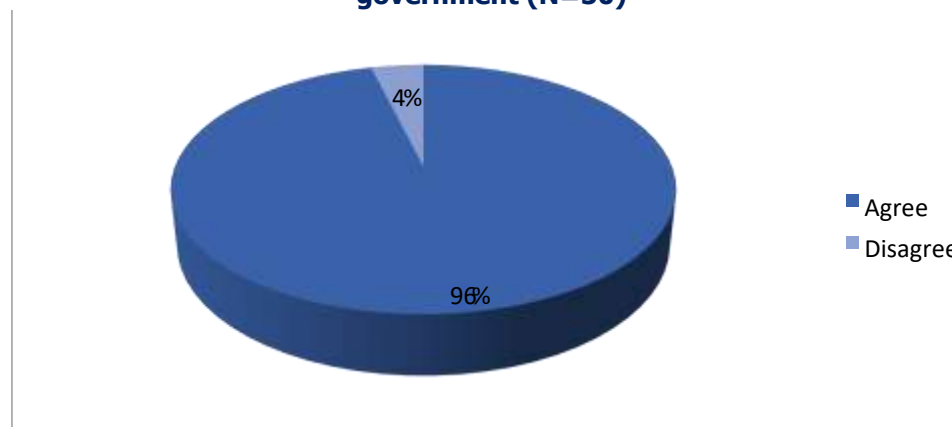


Figure 1, almost all of the respondents (96%) agreed that solid waste is one of the environmental problems of the community which requires immediate attention by the government while the least (4%) disagreed.

Figure 2: Distribution of respondents according to whether they thought that reducing, reusing, and recycling wastes was appropriate (N=50)

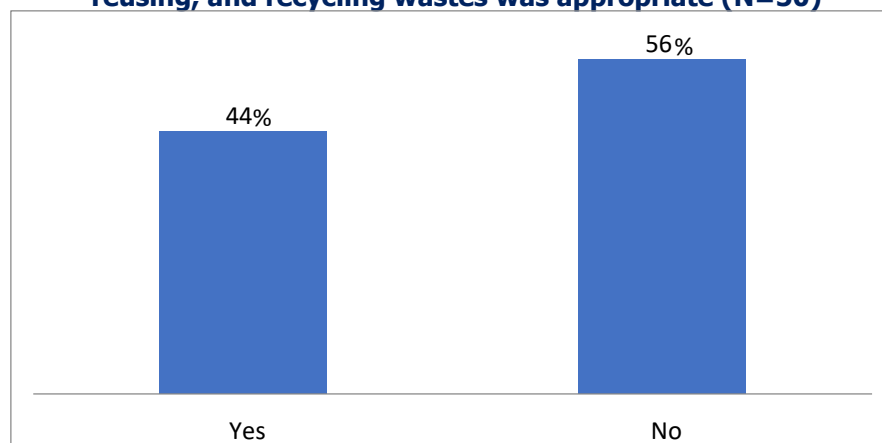


Figure 2, the majority of the respondents (56%) reported “No” to reducing, reusing, and recycling wastes being appropriate while the least (44%) said “Yes”.

Table 2: Distribution of respondents according to whether they felt comfortable about the way solid waste is managed in their community (N=50)

Response	Frequency (f)	Percentage (%)
Strongly agree	1	2
Agree	2	4
Not sure	4	8
Disagree	10	20
Strongly disagree	33	66
Total	50	100

Table 2, the majority of the respondents (66%) strongly disagreed that they never felt comfortable about the way solid waste is managed in the community whereas the least (2%) strongly agreed.

Table 3: Distribution of respondents according to whom they thought was responsible for solid waste management in their community (N=50)

Response	Frequency (f)	Percentage (%)
Government	21	42
NGOs	2	4
Residents	17	34
I don't know	10	20
Total	50	100

Table 3, most of the respondents (42%) thought that the government is responsible for solid waste management in their community whereas least of the respondents (2%) thought NGOs.

Figure 3: Distribution of respondents according to whether they bothered to know where waste is taken for disposal after collection (N=50)

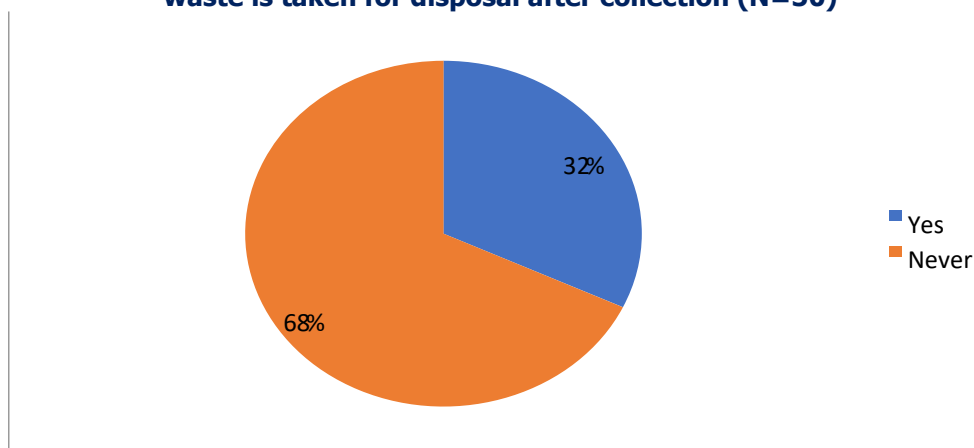


Figure 3, the majority of the respondents (68%) never bothered to know where waste was taken for disposal after collection while the least (32%) bothered.

Figure 4: Distribution of respondents according to whether they thought proper waste management promotes environmental and human well-being (N=50)

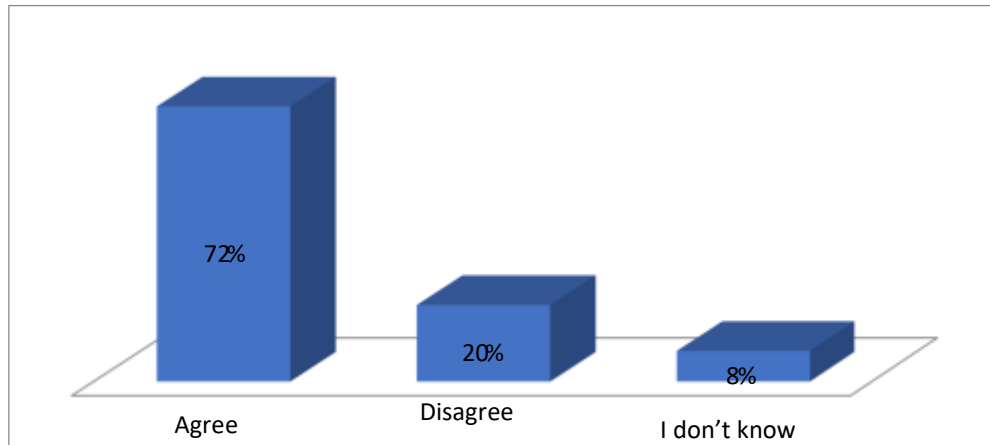


Figure 4, more than half of the respondents (72%) agreed that proper waste management promoted environmental and human well-being while the least (8%) didn't know.

Discussion

Attitude towards solid waste management among the residents

The current study findings discovered that almost all of the respondents 96% agreed that solid waste is one of the environmental problems of the community which required immediate attention by the government. This implied that almost all the respondents were aware of the dangers of improper solid waste management. The study findings were consistent with Hailu et al, (2023) where the result indicated that the majority 87.4% of the households “strongly agreed” that solid waste is one of the environmental problems of the city which requires immediate attention by the city government. The results were also consistent with Abdikadir et al, (2019) where 52.0% of the respondents strongly agreed that waste is one of the environmental problems that needs immediate attention.

The study also discovered that the majority of the respondents 56% reported that reducing, reusing, and recycling wastes was inappropriate. This implied that the majority of the respondents had poor attitudes toward reducing, reusing, and recycling waste. The study findings were inconsistent with Hailu et al, (2023) where over 70% of the respondents accepted the principle that solid waste can be reduced, reused, and recycled.

The majority of the respondents 66% strongly disagreed that they never felt comfortable about the way solid waste is managed in the community. This implied that the respondents were not satisfied with the way solid waste is managed in the community. The study findings were consistent with those of Opio, (2021) where the majority of the respondents 66% strongly disagreed that they never felt comfortable about the way solid waste is managed in the community.

Based on the current study findings, most of the respondents 42% thought that the government is responsible for solid waste management in their

community. This implied that most of the respondents were not aware of who was responsible for solid waste management in their community. These findings were consistent with those of Opio, (2021), where It was revealed that the majority 74.7% of the participants reported that it's the responsibility of the government to manage waste in the community. These findings were also in disagreement with Hailu et al, (2023), where slightly over 62% and 28.5% of the households “strongly agreed” and “agreed” that proper solid waste collection and disposal was the responsibility of every household respectively.

The majority of the respondents 68% never bothered to know where waste was taken for disposal after collection. This implied that the respondents didn't mind knowing where the waste was disposed of as long as it was taken away from their households. These study findings were in line with those of Mbiro et al, (2020), where the majority of the residents 63.6% indicated that they have never bothered to know where waste is taken for disposal after collection.

The study findings also revealed that more than half of the respondents (72%) agreed that proper waste management promoted environmental and human well-being. This implied that the respondents had a good attitude about the dangers of improper solid waste management. These findings were consistent with Oladejo & Amosu, (2016) who revealed that 47.8% of the respondents strongly agreed that proper waste management promotes environmental and human well-being.

Conclusion

The attitudes towards solid waste management were good in the view that most respondents agreed that solid waste is one of the environmental problems of the community that requires immediate attention by the government and the community.

Recommendations

Municipal medical officers should initiate massive sensitization and health education campaigns in the

community to improve the knowledge, attitudes, and practices of the residents about solid waste management.

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ABBREVIATIONS

KSHS: Kampala School of Health Sciences

MSW: Municipal solid waste

UNEP: United Nation's Environment Program

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Conflict of interest

The author declares no conflict of interest.

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