# Effect of Health Education on the Knowledge of Proper Waste Disposal among Pupils of Elites International School, Awka

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## ABSTRACT

Waste generation is an inevitable phenomenon that occurs in an environment especially schools. This study determined the effect of health education on the knowledge of proper waste disposal among pupils of Elites International School, Awka. Two research questions guided the study. The quasi-experimental research design was used for the study. The simple random sampling technique was used to draw a sample of 50 out of 200 pupils. The instrument for data collection was a researcher's designed questionnaire. The data collected were analyzed using mean and standard deviation. The findings of the study revealed among others that the health education intervention on the knowledge of proper waste management among pupils of Elite international school was effective. The findings of the study also revealed that there is an increase on the knowledge of best waste disposal method among pupils of Elites International School, Awka after the health education programme on proper waste disposal. It is important to emphasize on the need for proper waste disposal in schools because it is essential to protect students' health, prevent disease outbreaks and maintain a conducive environment.

**Keywords:** Solid waste disposal, Health Education, Waste management

## INTRODUCTION

The global environmental sustainability is very essential for health promotion; the need for the human environment to be kept clean cannot be over emphasized. World Health Organisation (2026) stated that good health depends on clean air, a stable climate, a preserved natural environment, as well as access to adequate water, sanitation and hygiene .The 12th goal of the sustainable development focuses on minimizing waste generation, reducing food waste and promoting the sustainable management and use of natural resources (United Nations, 2023). However, waste generation is an inevitable phenomenon as far as man is in existence. It is pertinent to know that the condition and rate of waste generation in the developed and developing countries are quite different. Nigeria generates an estimated 32-42 million tones of solid waste annualy, with per capita rates of 0.5 to 0.95 kg per day depending on the region (Omokaro et al, 2026). As the volume and complexity of solid waste increase, the environmental risk posed by the waste products including human health risks, ecosystem degradation, contamination of soils and water, as well as, greenhouse gas emissions, global warming, and climate change become more serious.

Solid waste refers to any garbage, refuse, sludge, and other discarded materials including solid, semi-solid, or contained gaseous materials, resulting from industrial, commercial, running and agricultural operations, and from community activities (New York State Department of Environmental Conservation, 2015). Solid wastes constitute the following materials when discarded: Paper bags, polythene bags, bottles, agricultural solid waste (tomato peels, cabbage, sugar cane, yam peels, etc.), waste tyres, scrap metal, latex paint, furniture and toys, garbage, appliances and vehicles, oil and anti-freeze, empty aerosol cans, and compressed gas cylinders, construction and demolition debris, and asbestos.

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One of the places where solid waste is mostly generated is the school environment. Globally, most public schools are facing a high level of pollution as a result of poor knowledge of solid waste management. The situation in less-developing countries such as Nigeria is more acute, partly because of the lack of adequate solid waste disposal facilities and students negative attitude towards the school environment. The negative attitude of the society towards the environment also affects the educational institution whose problem has been aggravated by constant changes, not just in curriculum content but also school subjects. This level of pollution faced in schools can be reduced through solid waste management.

According to Semshak, Mulak and Kitgakka, (2023). Solid waste management is the collection, treatment and disposal of solid materials that are discarded because they have served their purpose or are no longer useful. Improper disposal of solid waste can create unsanitary conditions, and these conditions, in turn, can lead to pollution of the environment and the outbreak of vector-borne diseases, that is, diseases spread by rodents and insects. The task of solid waste management presents complex technical challenges. It also poses a wide array of administrative, economic, and social problems that must be managed and solved (Jerry, 2015). Teachers and students knowledge and attitude towards solid waste management appears to be crucial as they ultimately play a direct role in providing knowledge-based solutions to future environmental problems. School environmental programs, if properly channelled can also influence the environmental knowledge, attitude and behaviour of adults (parents, teachers and local community members) through the process of intergenerational influence. Adaye (2019) asserts that teachers and students' knowledge of waste management play a central role in recycling solid waste which help in generating wealth "waste to wealth" this will enhance independency among young employed and unemployed youths.

Every school generates waste from routine activities such as classwork, sweeping, serving of food, and bush cutting. The common types of solid wastes found in various schools include paper, grass, nylon (pure water bags and biscuits, lollypops, ice cream and sweet or candy wrappers), sugar cane, maize cobs, and groundnut shells. Other forms of wastes may also be found on school premises, and these may not have even been generated directly by pupils and teachers. The waste from these activities mentioned can generate wealth when properly managed and recycle but unattended waste lying around attracts flies, rats, and creatures that in turn spread diseases. WHO (2024) estimates that about 1.8 million people die annually from diarrheal diseases where 90% are children under five, mostly in developing countries. This health problem can simply be averted through heath education in schools. A health education program focused on proper waste disposal can significantly improve the knowledge of pupils regarding appropriate waste management practices, leading to better understanding of the environmental and health impacts of improper disposal, and potentially influencing positive behavioral changes like waste segregation and responsible discarding of trash; essentially, the more informed pupils are about proper waste disposal through health education, the more likely they are to adopt these practices in their daily lives.

**Purpose of the Study**

The main purpose of this study is to determine the effect of health education on the knowledge of proper waste disposal among pupils of Elites International School, Awka. Specifically, the study determined the mean knowledge score of;

1. proper waste management before and after health education among pupils of Elites international school, Awka

2. best waste disposal method before and after health education among pupils of Elites international school, Awka

**Research questions**

1. What is the mean knowledge score of proper waste management before and after health education among pupils of Elites international school, Awka?

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2. What is the mean knowledge score of best waste management method before and after health education among pupils of Elites international school, Awka?

# METHODS

The research design used for this study was the quasi-experimental research design. The study area was Elites International Primary school, Awka located at No 38 obuagu street, Umuike Awka. The population of the school consists of 200 pupils. The sample size for the study consists of 50 pupils who were gotten through simple random sampling. The instrument for data collection was a structured questionnaire which was validated and subjected to a reliability test. The researcher collected pre-test data using the questionnaire after which a health education intervention programme on proper waste disposal was given for a period of five (5) days. The researcher final administered the post- test at the end of the five days and both the pre-test and the post-test were compared to measure the effect of the programme on the knowledge of proper waste disposal among pupils of Elites International School, Awka.

### Presentation and analysis of data

### Research question 1

Table 1What is the mean knowledge score of proper waste management before and after health education among pupils of Elites international school, Awka?

| | Pre-test | | | Post-test | | | Mean Difference |
|---|---|---|---|---|---|---|---|
| **Items** | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** | |
| Knowledge of proper waste management among pupils of elites international school, Awka. | 50 | 8.24 | 4.39 | 50 | 11.40 | 1.19 | 3.16 |

The table shows that the mean score of pre-test and post-test of knowledge of proper waste management among pupils of Elites International School, Awka are 8.24 and 11.40 respectively. Thus, the mean difference between the pre-test and post-test is 3.16. This implies that there is an increase on the knowledge of proper waste management among pupils of Elites International School, Awka after the health education programme on proper waste disposal.

### Research question 2

Table 2 What is the mean knowledge score of best waste management method before and after health education among pupils of Elites international school, Awka ?

| | Pre-test | | | Post-test | | | Mean Difference |
|---|---|---|---|---|---|---|---|
| **Items** | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** | |
| Knowledge of best waste disposal method among pupils of elites international school, Awka. | 50 | 7.66 | 1.69 | 50 | 11.40 | 1.19 | 3.74 |

The table shows that the mean score of pre-test and post-test of knowledge of best waste disposal method among pupils of Elites International School, Awka are 7.66 and 11.40 respectively. Thus, the mean difference between the pre-test and post-test is 3.74. This implies that there is an increase on the knowledge of best waste disposal method among pupils of Elites International School, Awka after the health education programme on proper waste disposal.

## DISCUSSION

The findings from this study showed that the health education intervention on the knowledge of proper waste management among pupils of Elite international school is effective. This is in line with the finding in the study conducted by Mohammed, Bilkisu, Maigandi and Sama'ila (2026) which showed that health education intervention in knowledge of waste management among residents of Bauchi State Nigeria is effective.

The findings from this study showed that there is an increase on the knowledge of best waste disposal among pupils of Elites International School, Awka after the health education programme on proper waste disposal. Some of the best ways listed were Recycling different waste streams, Reusing items where possible and Reducing waste generation. This is in line with the finding in the study conducted by Mpuangnan, Hlengiwe, and Govender (2023), who stated that the most effective waste management method for schools is an Integrated Solid Waste Management (ISWM) system driven by the 3Rs (Reduce, Reuse, Recycle) and on-site composting.

## CONCLUSION

The study on the effect of health education programme on proper waste disposal among the pupils of Elites International School, Awka had a positive effect on the pupils' knowledge of proper waste management and the best waste disposal method to adopt in schools. This increase in their knowledge of proper waste disposal can play a central role in recycling solid waste generated in school. This can help in conservation of natural resources, reduction of greenhouse gas emission and pollution.

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