

KNOWLEDGE AND ATTITUDE OF SECONDARY SCHOOL STUDENTS TOWARDS SANITATION IN ESTAKO WEST LGA, EDO STATE

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Abstract

The study was undertaken to assess the knowledge and attitude of secondary school students in Estako West LGA towards sanitation practice. Three research questions were raised and one hypothesis tested at 0.05 alpha levels. Various literatures were reviewed related to the study. This research utilized descriptive research design. This technique was used for reasons that it takes into consideration the heterogeneous nature of the population to be sampled. The population of this study includes all secondary school students in Estako West LGA. A purposive sampling technique was used for the study; 150 respondents were purposively selected to determine the sample that represents the entire population. However 105 questionnaires were retrieved successfully hence a return rate of 70%. Frequencies, percentages, mean and standard deviation (SD) were the statistics used to take decision on various research questions. The study revealed that majority of the respondents have high knowledge of sanitation among students in Estako west LGA; majority of the respondent agreed that the use of hand disinfectant is better than hand washing with soap, that proper hand hygiene prevents severe infections like cold, noro-virus, Hepatitis A and viral meningitis, that practice of school center waste management is not important to them, that buying fruits and vegetables without plastic packaging is necessary to them, there is a weak positive correlation between sanitation attitude and their knowledge of sanitation which is significant at 0.05. From the findings in the study, it can be recommended that the school management should intensify effort in encouraging and providing improved coverage on sanitation in the school through regular inspection of sanitary condition.

Keywords: Environmental awareness, Environmental education, Sanitation Knowledge of environmental issues, Environmental attitudes.

Introduction

Globally, access to adequate water, sanitation, and hygiene (WASH) services remains a challenge, especially in developing countries. In Nigeria, the sanitation situation is particularly concerning. It is estimated that over 95 million Nigerians lack access to basic sanitation services, while approximately 48 million people still practice open defecation (UNICEF, 2024). This highlights the magnitude of the sanitation crisis and its implications for public health.

Environmental issues have become one of the most pressing challenges facing the global community. From climate change and deforestation to improper waste disposal and water pollution, the degradation of the environment poses a serious threat to sustainable development and human well-being. In response, environmental education has gained increasing attention as a critical tool for raising awareness and shaping positive attitudes and behaviors, particularly among young people. Water Aid Uganda (2013) highlights the link between health and education, noting that good health supports effective learning, while education also promotes better health. Learning in an unhygienic environment can hinder educational outcomes; for instance, poor sanitation can lead to illnesses such as diarrhea, which may cause students to miss school and, as a result, fall behind in their learning. Danida

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(2007) states that school often suffers from non-existences or insufficient water supply, sanitation and hand washing facilities, dirty and unsafe water supply, toilets and latrines that are adapted to the need of students particularly girls, non-existence of hygiene education, unhealthy and dirty classrooms/school compound, etc. Historical records indicate that ancient Babylonian excavations have uncovered drainage systems and cesspools dating back over 6,000 years, resembling those used by modern Arabs inhabiting the region. Additionally, around 1600 B.C., Moses established a set of sanitation laws that have influenced practices through the centuries. In ancient Jerusalem, aqueducts, such as those from the Pools of Solomon and the Pools of Hezekiah which were constructed to supply water for sanitation purposes. The significance of sanitation has been emphasized since ancient times. Hippocrates, known as the father of medicine, authored three books dedicated to the subject, highlighting its critical role in public health. In Nigeria, sanitation became a national concern during the military regime of General Muhammadu Buhari in 1985, when sanitation was incorporated into the "War against Indiscipline" campaign. Citizens were required to participate in mandatory sanitation exercises held on the last Saturday of every month (Adegoke, 2012).

People responded to the directive in different ways. Some willingly participated, recognizing the health benefits of proper sanitation and eagerly looked forward to the monthly clean-up as it became a routine in their homes and communities. Others complied solely out of fear of military enforcement and the consequences of disobedience. While some saw it as an opportunity to travel early and avoid the restriction period, others perceived it as an example of authoritarian control in a civilian context. These varied responses demonstrate that individuals have different levels of awareness, attitudes, and behaviors toward sanitation creating a pattern also observable among students.

According to the World Health Organization and UNICEF (2012), basic sanitation is defined as access to facilities for the safe disposal of human waste (such as feces and urine), along with the ability to maintain hygienic conditions through effective garbage collection, hazardous waste management, and treatment of wastewater. Ogawa (2005) observed that poor sanitation and the unsafe disposal or storage of waste in schools and classrooms can attract disease-carrying vectors and even dangerous animals such as reptiles. These conditions highlight the need for effective sanitation measures within school environments. Educating students about sanitation plays a key role in shaping positive attitudes and improving their knowledge, which can lead to healthier practices.

Nwakale et al (2017) identified common sanitation problems in schools, such as polythene and paper litter scattered around the premises and an insufficient number of toilets shared by many students. These issues can negatively affect students' health. When students fall ill due to poor sanitation, they are more likely to miss classes or lectures, which may result in lower academic performance.

The situation is also critical in the education sector. Reports indicate that about 70% of schools in Nigeria lack access to basic sanitation facilities, thereby exposing students to unhygienic conditions (UNICEF, 2024). The absence of proper sanitation infrastructure in schools contributes to poor hygiene practices, increased disease transmission, and reduced student concentration and academic performance.

In Edo State, particularly in Estako West Local Government Area, challenges such as inadequate sanitation facilities, poor waste management systems, and limited access to clean water may further complicate sanitation practices in schools. Secondary school students, who are at a formative stage of behavioral development, are expected to adopt and sustain proper sanitation habits. Therefore, assessing their knowledge and attitudes toward sanitation is essential for designing effective interventions aimed at improving hygiene practices and overall public health.

Statement of the Problem

Waste disposal, refuse management, and inadequate water supply are major environmental challenges, especially in schools and other educational institutions. These problems are caused by several factors, including poor maintenance of health facilities, lack of hygiene education for students, limited or non-existent water supply, and poor sanitation, inadequate hand washing facilities, dirty water, and toilets that do not meet the needs of students. Additionally, many classrooms and school compounds are unhygienic and unsafe. These issues have serious consequences on student health. Diseases such as cholera, diarrhea, malaria, and typhoid, which are linked to poor sanitation and unsafe water, are common among students. When students are sick, they miss classes and cannot learn effectively. Even those who attend school may struggle to concentrate and understand lessons due to unhealthy environments. In severe cases, poor sanitation can lead to student deaths. According to Snel (2004) and Water Aid Uganda (2013), diarrhea caused by poor sanitation kills about 1.5 million children each year.

Despite these negative effects, there is limited evidence on how school management is addressing sanitation challenges within schools. While many existing studies focus on environmental sanitation strategies in broader community settings, few have examined the specific approaches used in schools (Sanni, 2015). The goal is to identify practical solutions that can reduce the health risks faced by students and improve their learning environment.

Objectives of the Study

The primary aim of this study was to examine the knowledge and attitudes of students in Etsako West Local Government Area towards sanitation practices. To achieve this aim, the study focuses on the following specific objectives:

- To explore students' knowledge of sanitation.
- To assess students' attitudes towards sanitation practices.

Research questions

The following research questions were raised to guide the study:

1. What is the level of knowledge of sanitation practices among students?
2. What are the attitudes of students towards sanitation practices?
3. Is there relationship between sanitation attitude of students and their knowledge of sanitation practices.

Hypothesis

To address adequately the research questions in this study, the below null hypothesis was formulated and tested at 0.05 level of significance.

- Sanitation attitude of students are not significantly related to knowledge of sanitation practices.

Methodology

This study adopted a **descriptive survey research design**, which is well-suited for capturing the diverse characteristics of the target population. This design was chosen because it allows for the collection of detailed information from a large, heterogeneous group without manipulating the variables under investigation. Furthermore, the descriptive survey approach is appropriate for studies that rely on existing conditions and historical data, as it provides an objective means of analyzing phenomena as they naturally occur. The population of the study comprised of all secondary school students in Estako West LGA. A **purposive sampling technique** was used in this study to intentionally select students who were most relevant to the research objectives. This method allowed the researcher to focus on individuals

with direct experience of sanitation practices within their school environments. A total of **150 students** were purposively selected from secondary schools across **Etsako West Local Government Area**. The selection process considered factors such as the location of the schools (urban and rural), the availability or lack of sanitation facilities, and student levels (with a focus on those in senior classes who are more likely to have developed awareness and attitudes towards sanitation).

By using this approach, the researcher ensured that the sample reflected a diverse range of students with meaningful insight into school sanitation issues. This was essential for accurately assessing students' knowledge, attitudes, and experiences related to sanitation practices.

The instrument that was used to collect the data for this research was self-structured questionnaire. The questionnaire instrument was divided into two sections. Section "A" elicited demographic information from the respondents and section B was used to ascertain the knowledge, attitude and sanitation practices. This section B for the knowledge aspect was multiple choice option (1 correct and 0 incorrect), the attitude was modified likert scale and the sanitation practice include items with YES or NO option which were scored 1 for Yes and 0 for No. Validity refers to data that are not only reliable but also true and accurate. Based on this, copies of questionnaire were given to three experts in the area of environmental studies, health sciences and regional planning for validation. Internal consistency reliability was adopted in this study to pilot test the questionnaire. Twenty (20) questionnaires were administered to students who are not part of the study population. Then their response was subjected to data analysis, Cronbach's alpha (α) was calculated with SPSS for attenuation. Cronbach alpha value of 0.79 was observed. Thus the instrument was reliable. Data were analyzed using frequencies, percentage, mean and standard deviation. Hypothesis was tested using Pearson Correlation. It was tested at 0.05 level of significance.

Results

Research question one: What is the level of knowledge of sanitation practices among students?

Table one: Level of knowledge of sanitation practices among students

s/n	Level of knowledge	Frequency	Percentage
1	High	57	54.3
2	Moderate	32	30.5
3	Low	16	15.2

- High knowledge-score of 7-10; Moderate knowledge- score of 4-6; low knowledge 0-3

The table one reveals the level of knowledge of sanitation practices among student. It can be seen that 54.3% of the respondents have high knowledge, 30.5% and 15.2% of the participants have low knowledge of sanitation practices among students.

Research question two: What are the attitudes of students towards sanitation practices?

Table two: Attitudes towards sanitation practices

s/n	Attitude aspect	SA	A	D	SD
1	The use of hand disinfectant is better than hand washing with soap	98(93.3%)	1(1.0%)	6(5.7%)	0(0.0%)

2	Microbes on door, toilet, and bathroom tap handles cannot cause illness.	10(9.3%)	5(4.8%)	35(33.5%)	53(52.4%)
3	Proper hand hygiene prevents severe infections like cold, noro-virus, Hepatitis A and viral meningitis	5(4.8%)	75(71.4%)	20(19.0%)	5(4.8%)
4	I feel good about the way plastic waste is managed in the school	0(0.0%)	15(14.3%)	50(47.6%)	40(38.1%)
5	Practice of school center waste management is not important to me.	50(47.6%)	55(52.4%)	0(0.0%)	0(0.0%)
6	Buying fruits and vegetables without plastic packaging is necessary to me	40(38.1%)	45(42.9%)	20(19.0%)	0(0.0%)
7	Taking old plastic bags for shopping, rather than using new ones is good for reducing the school center waste stream	52(49.5%)	5(4.8%)	13(12.4%)	35(33.3%)
8	Looking for packaging that can be easily re-used or recycled is wasting the time	30(28.6%)	50(47.6%)	20(19.0%)	5(4.8%)
9	Making use of old plastic bottles as drinking water bottle can reduce waste in the school	55(52.4%)	25(23.8%)	15(14.3%)	10(9.5%)
10	Picking plastic waste to sell can help to manage plastic waste	30(28.6%)	50(47.6%)	25(23.8%)	0(0.0%)

The table two shows the attitudes towards sanitation practices among students. It can be seen that 93.3% of the respondent strongly agreed that the use of hand disinfectant is better than hand washing with soap but 52.4% strongly disagreed that microbes on door, toilet, and bathroom tap handles cannot cause illness. Meanwhile, 71.4% agreed that proper hand hygiene prevents severe infections like cold, noro-virus, Hepatitis A and viral meningitis, 47.6% disagreed that they feel good about the way plastic waste is managed in the school, 52.4% agreed that practice of school center waste management is not important to them. Also 42.9% agreed that buying fruits and vegetables without plastic packaging is necessary to them, 49.5% strongly agreed that taking old plastic bags for shopping, rather than using new ones is good for reducing the school center waste stream, 47.6% agreed that looking for packaging that can be easily re-used or recycled is wasting the time, 52.4% strongly agreed that making use of old plastic bottles as drinking water bottle can reduce waste in the school and 47.6% agreed that picking plastic waste to sell can help to manage plastic waste. In view of these, it can be seen that the respondents have positive attitudes towards sanitation practices.

Hypothesis one: Sanitation attitude of students are not significantly predicted by their knowledge of sanitation

Table three: Pearson correlation on Sanitation attitude of students prediction of their knowledge of sanitation

Variables	Mean	S.D	R	r ²	Sig
Attitude	24.69	4.60	0.29	0.084	0.00
Knowledge	7.00	1.63			

The table four shows the Pearson correlation on Sanitation attitude of students prediction of their knowledge of sanitation. It can be seen that the mean for practice is 24.69, mean for knowledge is 7.00. The Pearson correlation coefficient (r) is 0.29 which shows that there is a weak positive correlation between sanitation attitude of students and their knowledge of sanitation which is significant 0.05. The r^2 value 0.084 (8.4%) shows that knowledge of sanitation contribute 8.4% of the variance of sanitation attitude of students.

Discussion of findings

The purpose of the study was to assess the knowledge and attitudes among students toward sanitation practice. It can be seen from the result of the study that majority of the respondents have high knowledge of sanitation practices among students. This is corroborated by Setyautami et al. (2011) when they stated that perception of the student of things which hindered the compliance to hand hygiene were less time, being too busy, clinical procedures, skin condition, lack of knowledge, and glove use. The authors went on to state that the perception most of the students had were seeing the other health care workers as an influence in compliance to hand hygiene because of the idea of “fitting-in” with the health workers in the clinical area.

It was also revealed in the study that majority of the respondent agreed that the use of hand disinfectant is better than hand washing with soap, that proper hand hygiene prevents severe infections like cold, noro-virus, Hepatitis A and viral meningitis, that practice of school center waste management is not important to them, that buying fruits and vegetables without plastic packaging is necessary to them, that taking old plastic bags for shopping, rather than using new ones is good for reducing the school center waste stream, agreed that looking for packaging that can be easily re-used or recycled is wasting the time, that making use of old plastic bottles as drinking water bottle can reduce waste in the school and that picking plastic waste to sell can help to manage plastic waste. In view of these, it can be seen that the respondents have positive attitudes towards sanitation practices. This is in line with study by Asiedu et al. (2011) stated that majority of the students did not exercise proper hand washing using soap as a result of unobtainability and no possible access to hand washing supplies such as soap, towel and a clean running source of water. Nevertheless, most (90.2%) of the students who visited the restroom washed hands with soap and water. 63% ($p=0.02$) gathered from the private schools were identified to have a less probable chance to wash hands after using the restroom, 51% ($p=0.03$) less probable to wash hands before eating and 77% ($p < 0.001$) less probable to wash hands after eating in comparison to the public school students.

Based on the hypothesis tested, the study showed that there is a weak positive correlation between sanitation attitude of students and their knowledge of sanitation which is significant at 0.05.

Conclusion

It can be concluded that that majority of the respondents have high knowledge of sanitation practices among students. It was also seen that majority of the respondent agreed that the use of hand disinfectant is better than hand washing with soap, that proper hand hygiene prevents severe infections like cold, noro-virus, Hepatitis A and viral meningitis, that practice of school center waste management is not important to them, that buying fruits and vegetables without plastic packaging is necessary to them, that taking old plastic bags for shopping, rather than

using new ones is good for reducing the school center waste stream amongst other. It was also observed that majority of the participants agreed that they dispose their waste into garbage bags, they collect waste such as vegetables and fruits in a trash bag before disposing of it, they wrap leftover foodstuffs tightly in plastic bag and throw away, they use the old plastic rather than buying new to reduce the school place waste, that they take old plastic bags to wrap / package, rather than using new ones, or take a durable bag amongst others. Based on the hypothesis tested, the study showed that there is a weak positive correlation between sanitation attitude of students and their knowledge of sanitation which is significant at 0.05.

Recommendation

Base your recommendations on the number of research questions and hypotheses

1. The school management should intensify effort in encouraging and providing improved coverage on sanitation in the school through regular inspection of sanitary condition.
2. Proper enlightenment should be carried out by both the school authority and private partners on the need for maintaining a healthy and hygienic environment.
3. Priority should be given to water and sanitation; this would on the long run curb disease caused by poor access to potable water and proper sanitation.
4. The issue of quality water and better sanitation is the responsibility of all; therefore all stakeholders must work as partners to bring about better service delivery.
5. Policy that would enhance better water and sanitation improvement should be implemented to improve on current situation.
6. Further research work should be encouraged so that progress in providing water and effective sanitation can be monitored and attaining the objective of the Millennium.

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