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ASSESSMENT OF USAGE OF WATER, SANITATION AND HYGIENE FACILITIES AMONG PUBLIC SECONDARY SCHOOL STUDENTS IN OGUN STATE

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ABSTRACT

The importance of school water, sanitation, and hygiene (WASH) in achieving the Sustainable Development Goal targets 6.1 and 6.2 in developing countries cannot be overemphasized. However, widespread WASH inequalities remain an impediment to achieving the target by 2030. Hence, this study was conducted to assess water, sanitation and hygiene facilities and usage among secondary school students in Ogun state, Nigeria. The study adopted quasi- experimental pre- test post-test control group design with 2x2x3 factorial. Two groups (experimental and control), two moderating variables, gender and parental educational status were treated with regard to WASH. Both groups were pre and post tested. Multistage sampling procedure was used to select 200 participants for the study from Ogun East Senatorial District of Ogun State. Three instruments were used for data collection. The study revealed that the students have access to the WASH facilities available in their schools; however, there was absence of soap in their toilets, the study recommends that Stakeholders and school principals in Ogun State should ensure provision of sanitary aids like soap or Ash in toilets for both students and teachers usage after defecation in the various public secondary schools in Ogun State

Keywords: Secondary Schools; Water; Sanitation; Hygiene Practices

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INTRODUCTION

A crucial public health concern in international development is universal, affordable, and sustainable access to water, sanitation, and hygiene, which is the focus of the first two Sustainable Development Goals (SDG) 6 objectives. Water and sanitation for everyone are the goals of targets 6.1 and 6.2. For both human and environmental health, water and sanitation are essential. The uneven emphasis placed on water supply and sanitation while ignoring the promotion of cleanliness could be detrimental, since poor hygiene habits frequently jeopardize the quality of the water and the progress made in preventing open defecation. Schools' water, sanitation, and hygiene policies have a significant impact on students' health as well as learning and the classroom atmosphere (Hennegan et al., 2019). Every child has the right to an excellent education, which includes having access to WASH services

while in school. A great deal of a child's day is spent at school, where WASH services may affect dignity, health, and learning, especially for females (Fisher et al. 2024).

Good sanitation might save the deaths of 1.5 million children from diarrheal and cholera illnesses each year (WHO / UNICEF, 2021). Kimutai *et al.* (2023) also opined that the risk of diarrheal can be decreased by 21% and cholera morbidity by 37.5% yearly, with improved water sanitation, and hand washing during key periods. These percentages suggest that healthier kids would be able to attend school frequently, which would result in an increase in academic development and perhaps even a guarantee of a better future (Kimutai *et al.* 2023). In an enabling environment, high-quality education depends on access to clean water and sanitary facilities. A school is deemed child-friendly in accordance with WHO Guidelines for Schools (2021) if WASH hardware and software are present and accessible to school-children of all ages including those with impairments. The WASH hardware consists of solid waste disposal bins, hand washing stations, menstrual hygiene management facilities, water infrastructure (water source and storage containers), and sanitation facilities (toilets and urinals). On the other hand, the WASH software components focus primarily on hygiene instruction (WHO, 2021) additionally, it is crucial to provide these WASH facilities and hygiene instruction to students, who will serve as any country's future leaders.

According to an estimate of UNICEF (2019), many schools lack access to clean drinking water and restrooms, which causes students to practice poor personal hygiene. Schools with poor water, sanitation, and hygiene conditions as well as high amounts of person-to-person contact are high-risk environments where diseases are easily transmitted, WHO (2020). Also, in cases where sanitation and hygiene instructions are provided, it is infrequent and typically takes the form of printed materials given to instructors or wall-mounted posters. The protection of people's health and well-being as well as the welfare of the society depends critically on universal access to water, sanitation, and hygiene (WASH) services (Goldface, 2021)

Students in particular are at risk of diseases related to water and sanitation due to poor quality water use. Majority of the African third world nations are, susceptible to diseases caused by contaminated water because of the problems with access to clean water (WHO, 2020). Students and community members are motivated to attend schools when there is access to clean water, and this has a good influence on how they view hygiene. One of the "highly effective practices in increasing access and learning outcomes" is the provision of water in schools (UNICEF, 2020). Water is essential for maintaining personal and environmental hygiene, and decreasing students' dehydration in schools

Sanitation is the hygienic practice of concealing human interaction from the hazards of waste to support good health. (Shresta *et al.*, 2020). Provision of facilities and services for the secure disposal of garbage is included in sanitation. A basic need and human right is access to proper sanitation for everyone. Securing access for all would significantly reduce the incidence of disease and death, particularly in children. Sanitation services that are properly handled reflect a higher degree of service. The goal of hygiene education in schools is to encourage healthy behaviours in

the upcoming generation of adults as well as behaviours that will help prevent diseases linked to water and sanitation. In terms of cleanliness, effective wastewater disposal, and access to clean drinking water, hygiene refers to excellent practices that promote health and prevent disease. Hygiene also refers to behaviours and circumstances that support preserving health and halting the spread of disease. They include activities related to maintaining health. Basic personal hygiene is the practice of keeping the exterior body parts clean and well-groomed. It entails actions like taking regular baths, washing of hands when necessary, clipping finger and toe nails, wearing freshly-laundered clothing every day, Brushing teeth and taking care of gums, washing hair to prevent dandruff and lice, and maintaining cleanliness (Shresta *et al.*, 2020).

The main goal of health education in schools is to modify behaviour through practical habits related to personal, water, food, home, and educational hygiene (Udeh, 2021). It also tries to manage environmental issues properly and safeguard water and food supply. By exposing students to a healthy or unhealthy learning environment, schools can gauge the health and wellbeing of their students. An empirical study on school-based health education and WASH in schools was conducted by Sharma *et al.* (2022). The study, School Water, Sanitation, and Hygiene: A Systematic Review of an Effect on Health, Attendance, Regularity, and Educational Achievements, found that intervention of school WASH facilities has an impact on students' health status, regularity of attendance at school, and academic achievement. The study recommends interventions in school-based WASH facilities to make children healthier, more dependable, and perform better academically since it prevent pupils from contracting a variety of infectious diseases brought on by poor WASH access. For many young people in their formative years, school may really be the sole nurturing and supportive environment where they receive continuous reinforcement for good behaviour and learn about health. There is also a close connection between good health and academic success. While education helps children learn about being healthy, good health helps children grow, develop, and study at their best; hence this study was conducted to investigate the impact of schools water, sanitation and hygiene facilities and usage among secondary school students in Ogun State.

Objectives of the study

This study sought to assess the impact of schools water, sanitation and hygiene (WASH) facilities and usage among secondary school students in Ogun state.

Specifically, it examined the percentage of secondary schools currently having adequate access to WASH facilities in Ogun state.

Research Questions

The following research questions were raised and answered in the study.

1. Are WASH facilities adequately available in secondary schools in Ogun State?
2. Are the secondary school students in Ogun State making use of the available WASH facilities?

METHODOLOGY

The study adopted quasi- experimental pre-test post-test control group design with 2x2x3 factorial matrix. Both groups were pre and post tested during the twelve (12) weeks intervention. Multistage sampling procedure was used to select 200 participants (100 for

the experimental and 100 for the control groups) for the study from Ogun East Senatorial District. Eight public secondary schools were purposively chosen from the three local government areas selected for the study. Four (4) secondary schools for the experimental group and other four (4) secondary schools for the control group respectively. Students from junior secondary school two (JSS 2) class were purposively chosen for both the experimental and control groups, 10 % of the intact classes were chosen from the different arms of JSS 2 students in the schools selected for the experimental and control groups respectively.

Questionnaire, Checklist and Multiple choice questions were used for data collection. Descriptive statistics involving frequency distribution and percentages were used to describe the characteristics of the participants in terms of gender and parents level of education. The same statistics was used to answer both research questions. Analysis of covariance (ANCOVA) test at 5% significance level with pre-test scores serving as covariates was used to test the hypotheses formulated to guide the study.

RESULTS AND DISCUSSIONS

Borehole facility, as confirmed by 87% of the sampled students was available in the schools (Table 1). 72.5% respondents confirmed that they had access to the schools toilet facilities, and 64.5% confirmed that water closet toilet amenities are accessible in their schools. It was also gathered that 57.5% respondents confirmed that surface water facility is not the source of water in their schools. 76% confirmed that in their schools, soap is not available in their toilets for hand washing. 84% confirmed there were no sanitary napkins in their toilets and 64.5% confirmed that water closet toilet amenities were accessible in their schools. About57% of the respondents confirmed that surface water facility was not the source of water in their schools. 76% confirmed that in their schools, soap was not available in their toilets for hand washing. 84% confirmed there were no sanitary napkins in their toilets and 64.5% confirmed there were no separate urinals for boys and girls in their schools (Table 1).

The outcome shows that the students responded positively (yes) to three of the seven items and negatively (no) to four items on the adequacy of available WASH amenities in the schools. It is thus concluded that although, some of the WASH amenities were accessible in the sampled secondary schools in Ogun State, they were not adequate.

The findings supports the study conducted by Olukanni (2021) who opined that there is a deplorable situation in many Schools of learning in the developing nations as the sanitation is very poor or non- existent, sometimes unsafe and might result to many diseases

Table 1: Frequency and Percentage Distribution of the Adequacy of Available (WASH) Facilities in Ogun State Secondary Schools

S/N	ITEMS	YES	%	N	%
	Borehole water supply is the source of water supply available in my school	174	87.0	26	13.0
	Surface water supply is the source of water available in my school	85	42.5	115	57.5
	Is soap available for hand washing in your school?	48	24.0	152	76.0
	Do you have accessible toilets in your school?	145	72.5	55	27.5
	Do you have water closet toilet facility in your school?	129	64.5	71	35.5
	Does your school provide sanitary napkins?	32	16.0	168	84.0
	Does your school have separate urinals for boys and girls?	67	33.5	133	66.5

Students were using the WASH facilities available in their schools (Table 2). 74% confirmed that they use the school sanitation facilities, 60.5% confirmed using the schools toilet facilities for defecating, 70.5% confirmed that they use water to clean up after defecating, 86% confirmed that they use water to rinse their private part after urinating, 73.5% confirmed that in their schools, they rinse their fruits with water before eating, 72% confirmed that they use water to wash their hands in the schools (Table 2). About 82% confirmed that they use water to wash their hands after visiting the toilet. However, 76% of the students reiterated the absence of soap in their toilets when 88.5% of the students confirmed that they don't use soap and water to wash their hands after defecating. The findings above are in line with a study carried out by Sharma, *et al.*, (2019) in the Rukum district who found the same thing: nearly all schools' restrooms lacked running water and soap-equipped hand washing stations, as well as separate rooms for menstrual hygiene management. Most girls avoided using the school restrooms or even going to school during this time because of these shortcomings. This outcome thus shows that the students responded positively (yes) to seven of the eight items and negatively (no) to just one, with respect to the items on whether or not they use the available WASH amenities in the schools. It is thus concluded that the respondents use the available WASH facilities in the sampled secondary schools in Ogun State.

The finding is supported by a study conducted by Olatunji and Thanny (2020) on a study of the availability and sufficiency of WASH amenities in secondary schools in Lagos State. Majority of respondents (87.4%,) acknowledged that a water closet is the most common type of restroom facility, followed by pit latrines (13.7%) and open space (1.6%) for defecation. The majority of respondents thought the availability of a wash basin was woefully insufficient. 51.7% of respondents assert that the school never or sporadically supplies tablet or liquid soap in addition to a wash basin. 51.6% of respondents claimed that the school didn't supply hand sanitizer near washrooms.

Table 2: Frequency and Percentage Distribution of the Use of Available (WASH) Facilities in Ogun State Secondary Schools

S/N	ITEMS	YES	%	NO	%
	Do you make use of the schools sanitation facilities while in school?	148	74.0	52	26.0
	Do you use the schools toilet for defecating during school hours?	121	60.5	79	39.5
	Do you use water to clean up after defecating	141	70.5	59	29.5
	Do you use water to rinse your private part after urinating while in school?	172	86.0	28	14.0
	Do you rinse your fruits with water before eating while in school?	147	73.5	53	26.5
	Do you use water to wash your hands often while in school?	144	72.0	56	28.0
	Do you use water to wash your hands after visiting the toilet?	163	81.5	37	18.5
	Do you use soap and water to wash your hands after defecating?	23	11.5	177	88.5

It was concluded that although, some of the WASH amenities were accessible in the sampled secondary schools in Ogun State, they were however not adequate. The study also revealed that the students were using the WASH facilities available in their schools; however, the students reiterated the absence of soap in their toilets.

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