



Participatory Hygiene and Sanitation Transformation for Hygiene Behaviour among Secondary School Students in Awka South Local Government, Anambra State

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Abstract

This study investigated participatory hygiene and sanitation transformation for hygiene behaviour among secondary school students in Awka, Awka South local government area, Anambra State. The descriptive survey research design was used for the study. Two research questions guided the study. The population for the study comprised 11,266 public secondary school students in the 18 public secondary schools in Awka, Awka South Local Government Area, Anambra State. A sample size of 200 secondary school students was selected for the study using multi-stage sampling procedure. The instrument for data collection was a 19-item structured test on Participatory Hygiene and Sanitation Transformation for Hygiene Behaviour Questionnaire. The reliability of the instrument was established using split half method, which yielded a reliability coefficient of 0.801. Data analysis was done using frequency and percentage. Findings revealed that secondary school students in Awka, Awka South LGA displayed very low knowledge that drying of hands hygienically after washing them prevent germs. However, students displayed very high knowledge that washing hands can prevent the spread of germs and diseases. The study further found out that students have very high knowledge that washing of hands after using the toilet can decrease the risk of diarrheal. It was also found out in the study that students do not perceive that poor hygiene affect one's mental health, Furthermore, the study found out that students have very low knowledge that poor fingernail hygiene can cause fungi infections. Based on these findings, the study recommended among others that efforts should be made by the school authorities to enlighten studies that poor hygiene can affect their mental health as this can lead to poor academic performance and absenteeism. Students should also be enlightened more on the impact of washing of hands and adhere to strict sanitation practices, Health education should be ensured, and hygiene clubs formed.

Keywords: Hand washing, Hygiene behaviour, Schools, PHAST, WASH

Introduction

Proper hygiene and sanitation practices are crucial for health, wellbeing, and development, especially for children and adolescents. However, inadequate access to proper water, sanitation and hygiene (WASH) facilities coupled with poor hygiene behaviours continue to pose significant public health risks and threats (United Nations Children's Fund [UNICEF], 2019). This is particularly concerning in developing regions, such as sub-Saharan Africa, where diarrhoea diseases account for over 16 per cent of deaths among children under five years old (World Health Organization [WHO], 2019). As students transition into adolescence, schools provide an important platform for promoting positive WASH practices, as their behaviours become more established during this period (UNICEF, 2018).



Participatory Hygiene and Sanitation Transformation is a valuable approach for promoting hygiene behaviour change at the community level, emphasizing participation and empowerment as key drivers of sustainable improvements. This in return will help curb the spread of infectious diseases in the society. The Participatory Hygiene and Sanitation Transformation (PHAST) approach provides a promising solution, using participatory learning techniques to engage communities in assessing their hygiene situation, identifying problems and planning solutions (Simplicity, 2016). The WHO's 2022 guidelines on sanitation and health emphasized the importance of context-specific adaptations of participatory approaches, including PHAST, and their potential integration with other community-led initiatives (WHO, 2022). According to Adebayo et al. (2021) evaluation, the use of PHAST in improving sanitation and hygiene practices in primary schools in Kwara State, Nigeria. The study showed positive results in terms of increased handwashing among students and improved maintenance of school sanitation facilities. Also, the research highlighted the role of students as change agents in their communities.

Hygiene behaviour is a multifaceted phenomenon that can be explained as the result of an interaction of numerous factors such as access to clean water and sanitation facilities, environmental cleanliness (e.g. waste management) and availability of hygiene products e.g. Soap.

In addition, children are at risk from contaminated water, lack of adequate sanitation, disease vectors, lack of safe waste disposal and degraded environments. (UNICEF, 2017). Poor sanitation and hygiene have been linked to diarrhea diseases, intestinal worms, schistosomiasis (bilharzia) and trachoma, all of which can impede children's growth, cognitive development, school attendance and academic performance (Ackley et al., 2019). General waste collection services are limited; indiscriminate dumping is common. (Ezenwaji et al., 2019). Schools often lack adequate water and sanitation infrastructure - a UNICEF (2015) survey found that in Delta and Anambra States, Water supply in Awka South LGA is mostly sourced from boreholes, wells, and water vendors (Ezenwaji et al., 2019), over 50 per cent of schools had no functional toilets. Poor WASH conditions in schools compromise children's health, dignity and educational opportunities (Sbatchnorm et al., 2021). This highlights the need for effective hygiene promotion practices targeting students in Awka South Local Government Area.

Furthermore, hygiene practices are also sub-optimal, only 53 per cent of people in Anambra State wash hands with soap after potential faecal contact (UNICEF, 2019). Behaviours, such as open defecation and improper disposal of child faeces persist, contributing to faecal contamination of the environment. Intestinal worm infection prevalence ranges from 12-61 per cent among school children in the Southeast region (Abah & Temple, 2015). Such statistics indicate considerable scope for improvement in sanitation infrastructure and hygiene behaviours. Knowledge levels tend to be reasonably high, but actual practice remains poor, indicating issues in translating knowledge into habitual behaviours (Abubakar, 2017). For example, despite 90 per cent of Nigerians being aware that handwashing prevents disease, only 13 per cent actually wash hands with soap after having contact with excreta (UNICEF, 2019). Behaviours are compromised by lack of convenient handwashing facilities and regular access to water and soap. Food hygiene is impacted by lack of clean water, proper storage containers and refrigeration (UNICEF, 2018).

A more recent study by Kema et al. (2023) examined the long-term sustainability of PHAST interventions in rural Tanzania. They found that while some communities maintained improved practices, others reverted to pre-intervention behaviours. While PHAST has shown promise in improving hygiene and sanitation practices, its effectiveness can vary depending on implementation and context. Studies suggest that integrating PHAST with other

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approaches and focusing on long-term sustainability may enhance its impact on community health and sanitation.

The Participatory Hygiene and Sanitation Transformation (PHAST) approach typically follows a structured series of participatory activities, often visualized through tools, such as mapping, three-pile sorting, and pocket charts. These activities are designed to guide communities through a process of: Problem identification, Problem analysis Planning for solutions, Selecting options, Planning for new facilities and behaviour change, Planning for monitoring and evaluation, Participatory evaluation. Each step involves interactive exercises that stimulate discussion, decision-making, and planning among community members (Malebo et al., 2012).

Nigeria demonstrates high-level political commitment to improving WASH access, manifested through policy frameworks and institutional arrangements at federal, State and local levels. Key initiatives include: National Water Supply and Sanitation Policy (2000) – which provides guidance to States and LGAs (Akpabio, 2012), Vision 20:2020 (2009) – which recognised WASH as a priority sector and set targets for 100 per cent access by 2020 (Federal Ministry of Water Resources(FMoW), 2016). Open Defecation Free (ODF) Nigeria Campaign (2016) - aims to end open defecation by 2025 (FMoW, 2016). WASH National Action Plan (2018) - strategy to attain Sustainable Development Goals which focuses on eliminating inequalities in WASH access (WHO & UNICEF, 2021). Anambra State Rural Water Supply and Sanitation Agency (RUWASSA) and Local Government Water and Sanitation Departments (WATSAN) - responsible for rural and small-town water supply and sanitation development and service provision (Okoye et al., 2015). National School Health Policy (2006) and Anambra State School Health Policy (2014) - provide standards and guidelines for provision of water, sanitation and hygiene facilities in schools (Alawode & Awofeso, 2018).

Despite these initiatives, there are no mechanisms to regulate school WASH services (Alawode & Awofeso, 2018), huge gaps remain in effective PHAST policy implementation due to factors, such as limited water supply, toilet facilities, and poor knowledge of the perceived impact of hygiene behaviour of secondary school students overall wellbeing. Therefore, By addressing gaps in knowledge, the perceived impact of hygiene behaviour, prevention of diarrhea and other water borne diseases and promoting healthy behaviors early in adolescence, there is potential to mitigate the long-term health and overall wellbeing of secondary students in Awka, Awka South Local Government Area of Anambra State and communities in Nigeria and around the world.. The findings will contribute to the existing literature on PHAST awareness and behaviors among secondary students. The results will inform the development of targeted educational campaigns, peer-led initiatives, WASH initiatives aimed at promoting hygiene behaviour. Therefore the study examined the participatory hygiene and sanitation transformation on hygiene behaviour and its perceived impact among secondary school students in Awka, Awka South LGA.

Materials and Methods

The research design used for this is the descriptive survey design.; the study was conducted in Awka, Awka South Local Government Area of Anambra State of Nigeria. The study participants are the teenagers basically the junior secondary school students (JSS1 JSS2) within the age bracket of 10-14 years in secondary schools owned by the government (public schools) in Awka, Awka South Local Government Area, Anambra State. The participants are 11,266 students from 18 secondary schools in Awka South Local Government Area, Anambra State (Post Primary School Service Commission (PPSSC) headquarters, Awka South, 2023). A sample size of 200 junior secondary school students (JSS1- JSS2) in Awka



South Local Government Area, Anambra State were used for the study. The study adopted multi-stage sampling procedure in sample size selection. The following steps were taken in the sampling: In stage one, simple random sampling technique of balloting without replacement was used to draw five schools from 18 public secondary schools using balloting method. In Stage two; Accidental sampling was used to select 40 participants based on ease of access and availability from each class of JSS1-2. Therefore, the sampling size drawn from the five secondary schools is 200 students. The instrument for data collection was a 19-item structured test developed by the researcher titled (KPEPHAST) using Yes/No, the questionnaire was made up of three sections. Section 'A' was on the biodata of the respondents while section 'B' contained items, on the knowledge of PHAST, while section C was on the Perceived impact of PHAST towards hygiene behaviour. The instrument was validated by three experts. The reliability of the instrument was measured using Kuder Richardson (K-R 20) which yielded a reliability index of 0.801. The reliability co-efficient is high enough for the instrument to be considered reliable, as suggested by Olayiwola (2007) that an instrument is considered reliable when its reliability co-efficient is close to one. The reliability of the instrument was done away from the area of study, the instrument was administered using direct delivery method. The researchers administered copies of the instrument on the study sample with the assistance of two research assistants and 190 copies of the questionnaire was returned. The data collected were analyzed using IBM Statistical Package for the Social Sciences statistics version 25, the responses were presented on frequency distribution tables. Percentage was used to answer the research questions whether students are knowledgeable about hygiene and sanitation. Decision Rule; 0-29%-very Low knowledge, 30-49% Low knowledge, 50-70%- High Knowledge- 71-100% very high knowledge.

Results

Table 1: **Percentage responses on level of knowledge of hygiene and sanitation among secondary school students in Awka, Awka South LGA**

S/N	Knowledge on hygiene and sanitation	YES f (%)	NO f (%)	DECISION
1.	Do you know about washing of hands with soap and water before eating? knowledge	185 (97.3)	5 (2.6)	Very high
2.	Do you know of washing of hands with soap and water after using the toilet? knowledge	186(97.8)	4 (2.1)	Very high
3.	Do you know that washing hands can prevent the spread of germs and disease? knowledge	185 (97.3)	5 (2.6)	Very high
4.	Does the use of clean water and soap when washing hands prevent germs? knowledge	180 (94.7)	10 (5.2)	Very high
5.	Does drying of hands hygienically after washing them prevent germs?	80 (42.1)	110 (57.8)	Low knowledge
6.	Does covering of food keep it safe from insects and dust? knowledge	180 (94.7)	10 (5.2)	Very high
7.	Does washing of fruit and vegetables prevents germs? knowledge	185 (97.3)	5 (2.6)	Very high
8.	Do you know that proper menstrual hygiene prevents infections? knowledge	186 (97.8)	4 (2.1)	Very high
9.	Do you believe clean surroundings prevent disease outbreaks? knowledge	189 (99.4)	1 (0.5)	Very high



10. Do you know that bathing regularly can prevent infectious diseases? knowledge	189 (99.4)	1 (0.5)	Very high
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Result in table one reveal that 97.3% of the respondents have a very high knowledge that washing of hands can prevent the spread of disease, while items 2,3, 4, 6,7,8,9 and 10 with 97.8%, 97.3%,94.7, respectively displayed very high knowledge .In items 5, it was shown that 42.1% of students displayed low knowledge that drying of hands after washing can prevent germs. Data presented in table 1 shows that students have very high level of knowledge on hygiene and sanitation.

Table 1: Percentage responses on level of knowledge of the perceived impact of hygiene and sanitation among secondary school students in Awka South LGA

S/N	Knowledge of perceived impact of hygiene behavior	YES f (%)	NO f(%)	DECISION
1.	Do you know that washing of hands after using the toilet can decrease the risk of diarrheal? knowledge	160(84.2)	30(15.7)	Very high
2.	Do you know that good hygiene practices can prevent illness risk? knowledge	170(89.4)	20(10.5)	Very high
3.	Has proper hygiene and sanitation improved your overall wellbeing? knowledge	180(94.7)	10(5.2)	Very high
4.	Do you feel more comfortable in clean and hygienic environments? knowledge	185(97.3)	5(2.6)	Very high
5.	Has hygiene education changed your behaviour? knowledge	90(47.3)	100(52.6)	Low
6.	Can poor cleaning of the environment cause respiratory illnesses? knowledge	130(68.4)	60(31.5)	High
7.	Can poor hygiene affect one's mental health? knowledge	50(26.3)	140(73.6)	Very low
8.	Does poor fingernail hygiene cause fungi infections? knowledge	30(15.7)	160(84.2)	Very low
9.	Can proper sanitation reduce environmental pollution? knowledge	160(84.2)	30(15.7)	Very high

Results in table two shows that students displayed very high level of knowledge on the perceived impact of PHAST on hygiene behavior in items 1,2,3,4 and 9 with 84.2%, 89.4%, 94.7% and 97.3% and 84.2% respectively. It was also shown that students displayed very low knowledge to items 7,8 and 9 with 26.3% and 15.7 % respectively. A significant majority (68.4.0%) have a high knowledge that good hygiene practice can prevent the risk of various illnesses.

Discussion

Knowledge of hygiene and sanitation among secondary students in Awka, Awka South LGA

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The study revealed that secondary school students in Awka, Awka South LGA displayed very low knowledge that drying of hands hygienically after washing them prevent germs. However, students displayed very high knowledge that washing hands can prevent the spread of germs and diseases. Students also displayed very high knowledge that it is essential to wash hands with soap and water after using the toilet. Further, the study found out that students have very high knowledge clean surroundings prevent disease outbreak. This finding supported the findings of Adebayo, Ademola & Olanrewaju (2021) evaluation, who found good knowledge of hygiene and sanitation among secondary students.

Knowledge of perceived impact of hygiene and sanitation among secondary students in Awka, Awka South LGA

The study revealed that, student have very high knowledge on the perceived impact of hygiene and sanitation. The study found out that students have very high knowledge that washing of hands after using the toilet can decrease the risk of diarrheal. The study also found out that a lot of students are knowledgeable that good hygiene practices can prevent illness risk. It was also found out in the study that students do not perceive that poor hygiene affect one's mental health, Furthermore, the study found out that students have very low knowledge that poor fingernail hygiene can cause fungi infections. This finding partly supports the findings of Abubakar (2017) which states that knowledge levels tend to be reasonably high, but actual practice remains poor, indicating issues in translating knowledge into habitual behaviours (Abubakar, 2017).The finding to a great extent serve as a base to ascertain the level of knowledge of participatory hygiene and sanitation transformation and its perceived effect is crucial to students, children and the general public at large. So as to know its health implications and ways to prevent, so as to reduce the spread of diarrheal, water borne diseases, intestinal worms and other harmful infections (Sbatchnorm et al., 2021).

Conclusion

In conclusion, the study revealed that the knowledge, perceived impact of participatory hygiene and sanitation transformation such as proper hand washing practice, cleaning of the environment, adequate hygiene education, awareness campaign and outreach. Studies have shown that knowledge and the perceived impact of PHAST are very high among secondary students in Awka South LGA, Anambra State .This highlights the need for effective public health education program to reduce poor WASH conditions in schools which compromise children's health, dignity and educational opportunities.

Recommendations

From the findings of the study, it was recommended that:

1. Efforts should be made by the school authorities to enlighten studies that poor hygiene can affect their mental health as this can lead to poor academic performance and absenteeism.
2. Students should be enlightened more on the impact of washing of hands and adhere to strict sanitation practices.
3. Health education on hygiene practices should be ensured and emphasized
4. Hygiene clubs should be formed
5. The School and its management should ensure that all students have their personal cleaning agents, such as soap, alcohol-based sanitizer.



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