

# Effects of Health Education on Knowledge of Personal Hygiene Practices Among Public Senior Secondary School Students in Bayelsa State Nigeria.

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**Abstract- Aim of the Study:** *The aim of this study was to investigate effects of health education on knowledge of personal hygiene practices among public senior secondary school students in Bayelsa State Nigeria.*

**Design/Methodology:** *The study adopted a pre-test – post-test design. The population of the study consisted of public senior secondary school students in Bayelsa State. The sample size of 347 was gotten using descriptive study formula for pretest-posttest design for a large population. The instrument for data collection was a validated structured interviewer-administered questionnaire, analyzed using mean, standard deviation and ANCOVA at 0.05 level of significance.*

**Findings:** *The result the study, ANCOVA showed that health education had a significant effect on knowledge of hand hygiene [ $F(1,215) = 17.14, p < 0.05$ ], knowledge of oral hygiene [ $F(1,215) = 3.18, p < 0.05$ ], knowledge of cloth hygiene [ $F(1,215) = 7.48, p < 0.05$ ], knowledge of body hygiene [ $F(1,215) = 8.00, p < 0.05$ ].*

**Practical Implications:** *It was concluded that health education had a significant effect on the knowledge of hygiene practices ranging from hand hygiene, oral hygiene, cloth hygiene and body hygiene among public senior secondary school students in Bayelsa State. The study recommended amongst others that the Government through the relevant boards and agencies should review and include the subject of personal hygiene in the curriculum for secondary schools in Bayelsa State and that teachers should be specially trained and equipped with the necessary skills and knowledge to handle the subject of personal hygiene when included in the school curriculum.*

**Paper Type:** *Research paper/article*

**Indexed Terms-** *Health Education, Knowledge, Personal Hygiene*

## I. INTRODUCTION

Personal hygiene is one of the most global means of disease prevention and it enhances the promotion and maintainability of good health. This healthful lifestyle can be achieved through consistent adherence to health information obtained from regular visit and access to health information. World Health Organization (2013) viewed hygiene as a conditions and practices that help to maintain health and prevent the spread of disease. Personal hygiene could be seen as a means of maintaining and improving the body's cleanliness at different stage in life through having full understanding about his/her body. Regular hygienic practice could be seen as good habits that is necessary for many reasons such personal, social, health, psychological way of life (Yadav et al., 2018). Certain factors or demographic characteristics determine the level of knowledge on personal hygiene practices among students. Prior study of Vivax et al. (2010) illustrated that 52% of students were classified as having adequate knowledge of proper hygiene. Students with adequate knowledge of proper hygiene were about 2 times more likely to have clean clothes (AOR 1.62) and low risk of parasitic infections (Vivax, 2010). Students who are aware of the principles of personal hygiene may show high level of aesthetics. Studies of Jayarajah et al. (2019) revealed that combined KAP scores on hand and attire hygiene were moderate (HH: 73%, AH: 65%) which indicated that students have certain level of knowledge about personal cleanliness and health. Personal hygiene is a preventive measure that must be undertaken to curtail the spread of infectious diseases. Marie-Rosette et al.

(2017) supported that only 34.6% and 38.6% of the respondents respectively knew how typhoid fever spreads and is prevented.

On the effect of health education on knowledge of the diseases associated with personal hygiene, Health education is the transfer of knowledge and aptitude required for enhancing quality of life, as it is a commonly recognized solution for avoiding diseases, furthermore, health education programs aim not only to develop new habits but also to sustain and enhance healthy behaviours that can promote health in individuals and communities (Alshahrani et al., 2021). Several diseases are associated with personal hygiene (especially poor personal hygiene), Diseases like athlete's foot (*tinea pedis*), scabies, dental caries, dandruff, trachoma, etc. The diseases that arise due to a personal hygiene deficiency remain a major public health concern, particularly in developing countries (Rajbhandari et al., 2018). It is expected that health education will enable the students to acquire the knowledge and possibly solutions on how to prevent these diseases.

## II. BACKGROUND OF THE STUDY

The effect of health education on the attitude of personal hygiene; Primary and secondary school days are the best time to learn healthful habits and improve practices. This is because as the children grow older, these habits become permanent. During the adolescence period, there are changes in the physical body such as the growth of pubic and body hairs in females, and the start of periods (menarche), as these changes occur, it means that their hygiene will need to improve positively too (Nurudeen & Toyin, 2020). And one of the ways that this can happen is through health education. The behaviour (attitude) of hand washing with soap turns out not to be a behaviour that is usually carried out daily by the general public, it is very important to have health promotion efforts with the aim of increasing hand washing (Saputri & Suryati, 2019). In developing countries like Nigeria, people are living in extreme conditions like poverty, pre-urban dwellings, poor availability of drinking water and improper sanitation, and these important problems/conditions are responsible for poor hygiene behaviour (Shekhawat et al., 2019). In Nigeria and other impoverished nations, personal hygiene

inadequacies have been highlighted as a serious public health concern, particularly affecting schoolchildren (Innocent et al., 2022).

According to Nadiya et al. (2020), a person's habits and knowledge will impact the disease suffered by that person. One strategy to increase children's knowledge about personal hygiene is by providing health education (Sinurat et al., 2023). Poor health among school students often results from a lack of awareness/knowledge of the health benefits of personal hygiene (Ranga & Majra, 2020).

On the effect of health education on the components of personal hygiene, the Centre for Disease Control and Prevention (2022), has stated that healthy foot hygiene practices include not only washing your feet but also clipping your toenails and wearing well-fitting, protective footwear, basically, the feet can be cared for through washing your feet every day and drying them completely, clipping your toenails short and keeping them clean, change your socks at least once a day, checking your feet regularly for cuts, sores, swelling, dryness, and infected toenails and apply treatment as needed. Another form of personal hygiene is hair care (hygiene), where hair care can be an indicator of general health status, hormonal changes, physical and emotional stress, and diseases that can affect hair characteristics (Rahman et al., 2018). The impact of hair care can be in the form of a person's appearance and well-being which often depends on the way his hair looks, because hair is a part of the body that has a function as protection and temperature regulation, and through hair changes in one's own health status can be identified (Sinurat et al., 2023). Another impact of hair care is psychosocial which results in a feeling of comfort (Sinurat et al., 2023). Cloth hygiene is a main part of the personal hygiene routine, it is very important to take care of the clothes by washing and changing their clothes regularly, especially if anyone from the family member is unwell, to make sure the clothes are clean and hygienic, add antiseptic liquid to make the laundry to kill any germs also making it tidy and clean (Kumar et al., 2020). Hand and oral hygiene is another area of personal hygiene, washing hands with soap is one of the hygiene actions by cleaning hands and fingers using water and soap by humans to keep them clean and break the chain of microorganisms as a source of

disease (Amar, 2021). Washing hands with soap is also known as an effort to prevent disease, this is done because hands are often carriers of microorganisms and cause these microorganisms to be transferred from one person to another, either by direct contact or indirect contact (using other surfaces such as towels, glasses, and so on (Susanto & Fitriana, 2015; Sinurat et al., 2023). Hand washing with soap can prevent the spreading of infectious diseases in the community, such as diarrhoea and helminthiasis. Handwashing behaviour, especially with soap, is still an important target in health promotion, especially related to clean and healthy living behaviour (Amar, 2021). Inappropriate and ineffective hand hygiene in school children are well documented to cause common infectious diseases such as diarrhoeal and respiratory infections, which are also among the most common causes of death in children (Mbakaya, 2022; Suen & Cheung, 2020; Younie et al., 2020). Knowledge of personal hygiene is very important because good knowledge can improve health and prevent diseases. Individuals with good knowledge of personal hygiene will always maintain personal hygiene to prevent illness or conditions (diseases). Hence, the study aim to effects of health education on knowledge of personal hygiene practices among public senior secondary school students in Bayelsa State, Nigeria.

#### Purpose of the Study

The purpose of this study was to investigate the effects of health education on knowledge of personal hygiene practices among public senior secondary school students in Bayelsa State, Nigeria.

#### Hypotheses

The following hypotheses were postulated to guide the study and were tested at 0.05 level of significance:

1. Health education has no significant effect on knowledge of hand hygiene among public senior secondary school students in Bayelsa State.
2. Health education has no significant effect on knowledge of oral hygiene among public senior secondary school students in Bayelsa State
3. Health education has no significant effect on knowledge of cloth hygiene among public senior secondary school students in Bayelsa State
4. Health education has no significant effect on knowledge of body hygiene among public senior secondary school students in Bayelsa State.

### III. MATERIALS AND METHODS

**Study Design:** The design adopted for this study was the pre-test – post-test design. This type of design allows for uncomplicated assessment of an intervention applied to group of study participants by the researcher.

**Study Population:** The population of the study was four thousand nine hundred and thirty three (4933) senior secondary school students, made of both male and female (Bayelsa State Post-Primary Schools Board, 2023).

#### Inclusion and Exclusion Criteria

##### Inclusion criteria

1. Students in senior secondary schools were included in this study
2. Government owned secondary schools were the only schools used for the study.
3. Both female and male students were used for the study.

##### Exclusion criteria

1. Students in junior secondary schools were excluded in this study
2. Private owned secondary schools were not included in this study
3. Only female and male students in senior secondary schools (SS 1 to SS 3) were studied

#### Study Tools

The tool for data collection was a self-administered questionnaire titled; “Knowledge of Personal Hygiene Practice (KPHP)”, The instrument consisted of two sections, A and B. Section A, elicited response on demographic data of respondents such as age, gender, class level, etc, Section B measured the KAP on personal hygiene of the respondents with response options on a modified scale of Yes (1), Don’t know (0), No (0) for knowledge, Section B was given under the different subclass which included; Knowledge of personal hygiene, and Practice of personal hygiene.

#### Sample Size

The sample size 347 was determine using descriptive study formula for a pretest and pretest design for a large population (Kothari & Garg, 2016).

The formula is  $\frac{z\sqrt{pq}}{e^2}$

Where n= sample size

Z= constant (1.96)

P= proportion of the population the researcher intended to study

q= the rate of confidence (1-p)

**Sampling Techniques:** A multi-stage sampling procedure was adopted for this study; comprising a cluster sampling technique, simple random sampling technique, stratified sampling technique, proportionate sampling technique and systematic sampling technique. Stage I: At this stage, the stratified sampling method was used to group the state (Bayelsa State) into three strata (geographical zones), with each stratum comprising some local government areas (LGAs); Bayelsa North (3 LGAs), Bayelsa East (3 LGAs), Bayelsa West (2 LGAs). Stage II: Simple random sampling was used to select one local Government Area from each of the geographical zones above, implying three LGAs: Ogbia Local Government Area, Yenagoa Local Government Area and southern Ijaw Local Government Area were selected using balloting with replacement. Stage III: at this stage, simple random sampling was again employed to select two secondary schools from the three listed LGAs above: Stage IV: Here, proportionate sampling was used to allocate samples to the selected secondary schools according to their size. Stage V: Here, a systematic sampling method was used to pick the specific number of students from the selected schools that participated based on the number allocated to the school by proportion.

**Validation of the Instrument:** The two responses from the administered instrument were correlated using the Pearson-Product moment correlation (r) to establish the reliability of the questionnaire, and the values of 0.84 were obtained for Knowledge of personal hygiene which indicated that the instrument was reliable.

**Data Collection:** The consent letter was presented to the various school Principals to enable the researcher to gain access to the respondents. The aim of the study and the method to be adopted were clearly explained to the respondents. Consent was sought from those who were selected for the study. This stage was carried

out in three phases: Pre-intervention, Intervention and Post-intervention.

**Data Analysis:** Data collected at both the pre-test and post-test were coded and entered into the statistical package for social sciences (SPSS) version 25.0. The analysis was based on 63% return

#### IV. RESULT ANALYSIS

The outcome of the study are shown below:

Table 1: Mean and standard deviation on effect of health education on hand hygiene among public senior secondary school students in Bayelsa State

Group	N	$\bar{X}$	Std Dev	Mean difference (post - pre)	Decision
Pretest	21	2.0	0.8	4.88	Positive effect
	9	0	3		
Posttest	21	6.8	1.4		
t	6	8	3		

Source: Field Survey

Table 1 showed the mean and standard deviation on effect of health education on knowledge of hand hygiene among public senior secondary school students in Bayelsa State. The result of the study showed that the pretest mean score was  $2.00 \pm 0.83$  (out of total possible score of 10) while the posttest mean score was  $6.88 \pm 1.43$  with a mean difference of 4.88, indicating a positive effect. Thus, health education had had positive effect on knowledge of hand hygiene among public senior secondary school students in Bayelsa State.

Table 2: Analysis of Covariate (ANCOVA) on effect of health education on knowledge of hand hygiene among public senior secondary school students in Bayelsa State

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial $\eta^2$

Corrected Model	94.78	1	94.7	17.1	.00	.74
Intercept	2308.537	1	2308	417	.00	.66
PreHand Hygiene	94.78	1	94.7	17.1	.00	.74
Error	1183.320	2	5.53	0		
Total	1151	2				
Corrected Total	1278.106	2				

\*Significant; p<0.05

Table 2 showed the Analysis of Covariate (ANCOVA) which was conducted to ascertain the effect of health education on knowledge of hand hygiene among public senior secondary school students. The result of the ANCOVA showed that health education had a significant effect [F(1,215) = 17.14, p<0.05] on knowledge of hand hygiene. Furthermore, 66.0% ( $\omega^2 = 0.66$ ) of the variance in the post-test hand hygiene knowledge score could be explained by the health education. Therefore, the null hypothesis which stated that, health education has no significant effect on knowledge of hand hygiene among public senior secondary school students in Bayelsa State was rejected.

Table 3: Analysis of Covariate (ANCOVA) on effect of health education on knowledge of oral hygiene among public senior secondary school students in Bayelsa State

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial $\eta^2$
Corrected Model	.952 <sup>a</sup>	1	.952	3.180	.072	.67
Intercept	2597.431	1	2597.431	489.860	.000	.69
PreOralHygiene	.952	1	.952	3.180	.072*	.67
Error	1183.320	2	5.9166			
Total	1151	2				
Corrected Total	1278.106	2				

Error	1134.710	2	5.30
Total	14689	2	
Corrected Total	1135.662	2	

\*Significant; p<0.05

Table 3 showed the Analysis of Covariate (ANCOVA) which was conducted to ascertain the effect of health education on knowledge of oral hygiene among public senior secondary school students. The result of the ANCOVA showed that health education had a significant effect [F(1,215) = 3.18, p<0.05] on knowledge of oral hygiene. Furthermore, 67.2% ( $\omega^2 = 0.672$ ) of the variance in the post-test oral hygiene knowledge score could be explained by the health education. Therefore, the null hypothesis which stated that, health education has no significant effect on knowledge of oral hygiene among public senior secondary school students in Bayelsa State was rejected.

Table 4: Analysis of Covariate (ANCOVA) on effect of health education on knowledge of cloth hygiene among public senior secondary school students in Bayelsa State

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial $\eta^2$
Corrected Model	3.985 <sup>a</sup>	1	3.985	7.420	.007	.48
Intercept	2474.225	1	2474.225	300.544	.000	.00
PreCloth Hygiene	3.985	1	3.985	7.420*	.007	.48
Error	1761.775	2	8.23			
Total	1204	2				
Corrected Total	4.000	2				

Corrected	1765.	2
Total	759	5

\*Significant; p<0.05

Table 4 showed the Analysis of Covariate (ANCOVA) which was conducted to ascertain the effect of health education on knowledge of cloth hygiene among public senior secondary school students. The result of the ANCOVA showed that health education had a significant effect [F(1,215) = 7.48, p<0.05] on knowledge of cloth hygiene. Furthermore, 48.7% ( $\omega^2 = 0.487$ ) of the variance in the post-test cloth hygiene knowledge score could be explained by the health education. Therefore, the null hypothesis which stated that, health education has no significant effect on knowledge of oral hygiene among public senior secondary school students in Bayelsa State was rejected.

Table 5: Analysis of Covariate (ANCOVA) on effect of health education on knowledge of body hygiene among public senior secondary school students in Bayelsa State

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squares
Corrected Model	.026 <sup>a</sup>	1	.026	8.003	.006	.95
Intercept	1777.723	1	1777.723	206.641	.000	.00
PreBody Hygiene	.026	1	.026	8.003	.006*	.95
Error	1841.011	24	8.603			
Total	1015.400	26				
Corrected Total	1841.037	25				

\*Significant; p<0.05

Table 1.5 showed the Analysis of Covariate (ANCOVA) which was conducted to ascertain the effect of health education on knowledge of body hygiene among public senior secondary school students. The result of the ANCOVA showed that health education had a significant effect [F(1,215) = 8.00, p<0.05] on knowledge of body hygiene. Furthermore, 95.6% ( $\omega^2 = 0.956$ ) of the variance in the post-test body hygiene knowledge score could be explained by the health education. Therefore, the null hypothesis which stated that, health education has no significant effect on knowledge of body hygiene among public senior secondary school students in Bayelsa State was rejected.

## V. DISCUSSION OF FINDINGS

The results of this study were discussed below:

The result of the ANCOVA showed that health education had a significant effect [F(1,215) = 17.14, p<0.05] on knowledge of hand hygiene. This finding is expected and thus not surprising because the health education on hand hygiene exposed the public senior secondary school students in Bayelsa State to basic health information, especially on hand hygiene, thus their knowledge level was increased/influenced positively giving rise to the positive effect on hand hygiene knowledge among the students. The provision of good and adequate education is expected to impact positively on knowledge, in this regard knowledge on hand hygiene among the respondents. The findings of this work corroborate with that of Amar (2021) whose study on the correlation between knowledge and habit of hand washing with soap in students of Primary school Bangun Rejo, Indonesia showed that there was a statistically significant relationship between knowledge and behaviour regarding hand washing. The similarity between the present study and Amar's could be due to the homogeneity of the study methodology and population in both studies as they were both focused on students. However, the findings of this study are not in agreement with that of Novák et al. (2020), whose work on the impact of hand hygiene knowledge on hygiene compliance among healthcare professionals showed that the differences between the groups of respondents with and without the proper hand hygiene compliance in routine hand washing were not statistically significant, the results of their survey have suggested that the reasons for

decreased compliance with hand washing protocols may be related to forgetting to wash hands, as they argued that after acquiring the knowledge, the respondents may be prone to forget. The variation found might be due to the difference in the study population, methodology/setting and study location between the two studies.

The result of the ANCOVA showed that health education had a significant effect [ $F(1,215) = 3.18$ ,  $p < 0.05$ ] on knowledge of oral hygiene among secondary school students in Bayelsa State. This finding was expected because the health education intervention was supposed to improve the respondents' knowledge of oral hygiene, however, they were doing most of the oral hygiene activities wrongly. Still, a well-suited health education on oral hygiene with adequate content and demonstrations aided the respondents in no small measure in improving their oral hygiene knowledge within the time frame adopted for the study. The finding of this study is akin to that of Sanadhya et al. (2014), on the effectiveness of oral health education on knowledge, attitude and practice and oral hygiene status among school children, which showed that an easy-to-organise and inexpensive school-based intervention can, on a short-term basis, be effective in improving oral cleanliness of children. It further suggests that organizing oral health education in high school children of the fishermen's community could lead to improvement in students' oral hygiene to ultimately enhance their oral health. The similarity between the present work and that of Sanadhya et al. (2014) could be attributed to the fact that both studies adopted similar methodologies, and the audience too share some homogeneity. The findings of this study are also in line with the works of Khanal et al., (2020) whose study on the effectiveness of oral health education on oral hygiene knowledge and practices of lower secondary school children in Kathmandu district, Nepal, showed that the oral health education was found to be effective in increasing oral health-related knowledge and practices of students. The similarity between the present study and that of Khanal and colleagues could be due to the homogeneity of the study population in both studies as they were both focused on the student population. The findings of this study also corroborate that of Sinha et al. (2022) whose study on the effect of structured education training programs on oral health awareness

among school-going children of central India, showed that a properly constructed school children-based oral health education and training program induces better results in the oral health-related comprehension of students. Again, the similarity between the present study and that of Sinha and colleagues could be due to the resemblance of the study population in both studies as they were both focused on the student population.

The result of the ANCOVA showed that health education had a significant effect [ $F(1,215) = 7.48$ ,  $p < 0.05$ ] on knowledge of cloth hygiene. Again, this finding was expected because adequate and suitable health education on cloth hygiene should lead to improved knowledge of cloth hygiene as corroborated by several authors. The result of this study is in line with Muller et al. (2024) which illustrated that good proportion of respondent health education background knew about washing of cloth and linen material and hygiene practices. Among the authors that supported this finding are Sinurat et al. (2023) whose work on the effect of health education on personal hygiene on students' knowledge showed an effect (positive effect) of health education on personal hygiene (cloth hygiene) on the knowledge of the students.

The result of the ANCOVA showed that health education had a significant effect [ $F(1,215) = 8.00$ ,  $p < 0.05$ ] on knowledge of body hygiene. The result of this study is in consonance with findings of Chaovirachot, (2022) affirmed that there was a statistically significant positive correlation between hygiene practice and knowledge and attitude toward personal hygiene. Sinurat et al. (2023) confirmed that found that 34 respondents (53.13%) had sufficient knowledge, then with good knowledge, 30 respondents (46.9%) depicting that respondents have more knowledge before being given health education about personal hygiene. Accordingly, the works of Khatoon et al. (2017), on the impact of school health education programs on personal hygiene among school children also support the position of this present work, they concluded that the overall trend of knowledge of personal hygiene (body hygiene) was in poor conditions among students at the time of pretest but post-test results were highly satisfactory, again showing a positive impact of the health education intervention on the knowledge of personal hygiene among the students. This similarity could also be

attributed to the homogeneity in the research methodology and population of both works.

## VI. CONCLUSION AND RECOMMENDATION

Based on the findings of the study, it was concluded that health education has a significant effect on the knowledge, of hygiene practices of hand hygiene, oral hygiene, cloth hygiene and body hygiene among public senior secondary school students in Bayelsa State. Hygiene-based oriented education should be designed for growing students to enable them to enhance good knowledge, improve good practice of hygiene to promote health status.

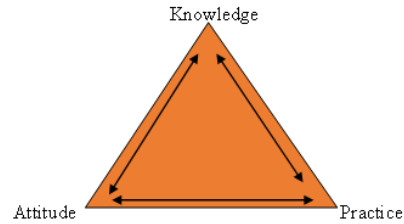
Based on the findings of the study, the following recommendations were made:

1. The Government through the relevant boards and agencies should review and include the subject of personal hygiene in the curriculum for senior secondary schools in Bayelsa State.
2. Teachers should be specially trained and equipped with the necessary skills and knowledge to handle the subject of personal hygiene when included in the school curriculum.
3. Teachers participating in the training of the students on personal hygiene should be provided with additional stipends by the Government to motivate them.
4. Management of post education institutions should ensure that all facilities and equipment that facilitate personal hygiene practice such as water supply, carriage system, among others should be put in place to enable full utilization.

## VII. THEORETICAL IMPLICATION

### The Rational Model

This rational model is also called knowledge, attitude and practice model (KAP model). The rational model was originally developed by World Health Organization in 2012. According to WHO (2012), KAP model is based on the premise that increasing a person's knowledge will prompt a behaviour change. It is significant to note that health knowledge alone does not guarantee change in behaviour. Most people hardly put what they know in practice.



In the context of personal hygiene, the KAP model helps to illustrate the relationship between an individual's knowledge about hygiene, their attitudes towards hygiene practices, and ultimately their actual behaviours when it comes to maintaining good hygiene practices.

## VIII. PRACTICAL IMPLICATION

**Knowledge:** The first component of the KAP model is knowledge. This depicts the information that an individual has about personal hygiene practices, such as the importance of washing hands regularly, brushing teeth, showering regularly, etc. Having a good understanding of the benefits of good personal hygiene can lead to an increased likelihood of engaging in hygiene practices. The outcome of public health education provides the sample with the requisite understanding and benefits of personal hygiene which was implicated in this study.

**Attitude:** Attitude refers to an individual's feelings and beliefs towards personal hygiene practices. For example, someone who has a positive attitude towards personal hygiene may be more motivated to engage in regular hand washing or teeth brushing. On the other hand, someone with a negative attitude towards hygiene practices may be less likely to engage in these behaviours probably due to lack of public health intervention.

**Practices:** This indicated that the actual behaviours that an individual engages in when it comes to personal hygiene. These behaviours are ultimately influenced by both knowledge and attitude modified through public health intervention. A person who has a good understanding of the importance of personal hygiene and a positive attitude towards hygiene practices is more likely to adopt and maintain good personal hygiene practices.



However, it is crystal clear that the possession of health knowledge does not necessarily result in good health practices such as personal hygiene practices; and practice or behavioural changes do not necessarily take place immediately after learning (health education) because social, cultural, and environmental factors can hardly be modified within a short time.

Rational models imply that a high level of knowledge concerning health problems will positively affect the attitude and in turn influence individual practices or behaviour. Health education affects individual behaviour especially those who are attending of school health service orientation programmes. In fact, health education provides students with necessary information to improve adequate knowledge and could not be enough to guarantee the practices of personal hygiene except positive decision choices are made by them. Therefore, health education is reliable to yield health knowledge and could predict modified practices of healthful lifestyle, example, and hygiene practices.

#### IX. LIMITATION AND FUTURE RESEARCH

The area of this study was Bayelsa State which is mainly a coastal region in South-South Nigeria. The major route of transportation was by water with boats which affect the movement of researcher within the selected Local Government Areas. The poor route of transportation was a challenge that delayed this study especially during data collection. These however, did not affect the validity of the results of this study. There is need to compare personal hygiene practices among residents in urban and rural areas. In the light of this study, the following future studies were prescribed:

1. Comparative study on knowledge and hygiene practices among residents in South-South Nigeria.
2. Effects of Public health education on knowledge and waste management practices among residents of Yenagoa, Bayelsa state, Nigeria.
3. Factors that determine improper hygiene practices among households in Yenagoa Municipals, Bayelsa State.

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