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### Assessment of Personal Hygiene Practices among Public Primary School Pupils in Owerri West Local Government Area in Imo State

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#### Abstract

Personal hygiene is the practice of maintaining cleanliness of one's own body and it is seen as a global issue among school children. This study was aimed on the assessment of personal hygiene practice among public primary school pupils in selected primary schools in Owerri West LGA in Imo State. A cross-sectional study design was employed and a self-administered questionnaire was used for data collection. The study population consisted of primary school pupils at Owerri West LGA and multistage sampling technique was used to select 427 respondents. Ethical approval was obtained from the Department of Public Health, FUTO. Results from the study showed that majority of the respondents 41.2% (176), were at the age group 10-12years, and majority of the respondents were Christians 89.5% (382). Findings from the study revealed that majority of the respondents 57.8% (247) aware of personal hygiene practice with 60.7% (259) of the respondents obliged to knowledge that personal hygiene including bathing, washing

your hands, brushing your teeth, etc. The study showed that majority 61.6% (263) of public primary school pupils in Owerri West LGA always brush their teeth daily and 57.4% (245) also affirmed they cut their nails always as a mark of hygiene practice. Considering the Barriers influencing personal hygiene practice, majority of the respondents 83.4% (356) indicated lack of adequate water supply as a challenge to practice of hygiene which means that the Owerri West community service lack water provision at school and community at large. The study concluded that there is a need for regular reinforcement to sustain the gains particularly with areas of assessment in the study showing that hygiene provisions are of water is lacking. Poor hygiene practice contributes account for majority of the illnesses together with other infectious diseases among school children. The study recommended effective health education and government provision of social amenities in the public primary schools.

**Keywords:** Assessment, Practice, Hygiene, Personal Hygiene

#### Introduction

Personal hygiene is an important and a global public health issue among school age children (World Health Organization, 2017) <sup>[39]</sup>. Hygiene refers to practices associated with ensuring good health and cleanliness (Goel & Kundan, 2011) <sup>[11]</sup>. Personal hygiene is the practice of maintaining cleanliness of one's own body (Goel & Kundan, 2011) <sup>[11]</sup>. Good hygienic care as well as practices in terms of personal hygiene contributes to a large extent on factors relating to healthful living and prevention of hazards from diseases (Loughlin, 2016) <sup>[19]</sup>. These health risk factors are directly related to some important daily activities implicated with worthy operational actions and obligatory responsibilities, such as washing hands before meals and after defecation with soap, brushing teeth at least twice a day specially after breakfast and after meals, taking bath with soap regularly, keeping nails short and taking regular exercise (Kumie & Ali, 2013). Also, it is Imperative to note that hygiene as an old concept related to medicine, as well as to personal and professional care practices. It involves practices and conditions that help to maintain health and prevent the spread of diseases as well as practices that deal with the preservation of health (Raghava, 2015; Rabiei *et al.*, 2012) <sup>[27, 26]</sup>. Regular hygienic practices may be considered good habits by a society while the neglect of hygiene can be considered disgusting, disrespectful, or even threatening (Lukacs & Largaespada, 2016; Lalani *et al.*, 2015) <sup>[20, 17]</sup>. Maintaining personal hygiene is necessary for many reasons such as personal, social, health, psychological or simply as a way of life. Sharda and Shetty (2018) <sup>[30]</sup> noted that keeping a good standard of hygiene helps to prevent the development and spread of infections and disease. This phenomenon therefore makes hygiene practices a great tool in predictive and preventive medicine processes. This comes at the back of the huge acknowledgement received by predictive and preventive medicine by global and regional organizations such as the Organization of United Nations, the European Union, and

the National Institute of Health (Goel & Kundan, 2011) [11]. The general objective of this study is the assessment of personal hygiene practice among government primary school pupils in Owerri west LGA. To determine the level of knowledge of personal hygiene practice among government primary school pupils in Owerri west LGA. To find out the various hygiene practices among government primary school pupils in Owerri west LGA. To determine the Barriers influencing the practice of various personal hygiene among government primary school pupils in Owerri West LGA.

**Materials/Methods**

The study employed a school based cross sectional descriptive survey design and simple random sampling technique using the balloting process to select the public primary school studied. A structured questionnaire that’s validated and its reliability tested were used to obtain a data from 427 public primary school pupils aged 5 years and above from the different selected schools.

**Study Population**

This study was targeted at every public primary school pupils selected at Owerri West LGA. Imo State, Nigeria.

**Inclusion criteria**

The study included:  
Respondents were primary 4-6 pupils in Owerri West LGA. Imo State, Nigeria.

**Exclusion criteria**

The study excluded:  
1. Primary 4-6 school pupils at Owerri West LGA who are seen to be sick at the time of study.  
2. Primary school pupils at who are disabled during the time of the study.

**Sampling**

**Sample Size Determination**

The sample size for this study was determined using Leslie Kish (1965) formula.

$$N = \frac{Z^2 (p q)}{d^2}$$

Where

- n =Desired sample size
- z=critical value at 95% confidence level of uncertainty (1.96)
- d=margin of error between the sample and the population= 5%
- p=estimated proportion p= 50%
- q=complimentary probability of p = (1-p)....., (i.e., 1-p) = 1- 0.5 =0.50

$$N = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2}$$

$$= \frac{3.8416 \times 0.25}{0.0025}$$

$$= \frac{0.9604}{0.0025}$$

$$= 384.16 \dots\dots\dots, =384$$

Adjusting for a 10% rate of non-response and invalid response (i.e., 90% expected response rate =0.90).

$$n = n / \text{expected response rate}$$

$$nrr = \frac{n}{1 - nrr}$$

$$= \frac{384}{1 - 0.10}$$

$$= \frac{384}{0.85}$$

$$= 426.8444444\dots\dots\dots, = 427$$

Therefore, the sample size for the study n, = **427**.

**Sample Methods**

A multistage sampling technique was used for this study on the assessment of the personal hygiene practices among public primary school pupils in Owerri West LGA. Imo State, Nigeria.

**First stage: Selection of public Primary Schools**

Twelve (12) out of the Forty-Four (44) public primary school in Owerri West LGA were selected via systematic random sampling to give every school an equal chance to be selected.

**Second stage: Selection of classes**

One class from Primary four, five and six each was selected from public primary schools in Owerri West LGA giving every primary school classes an equal chance of selection.

**Third stage: Selection of pupils**

At least, four hundred and twenty-seven pupils from each classes of primary 4-6 were selected for the twelve public primary school pupils were also selected. All concerned public primary school pupils were recruited consecutively until the minimum sample size was reached.

**Method of Data Collection**

Data was collected face to face to the respondents with the aid of a self-administered, well-structured and pre-tested questionnaire which was used to assess the knowledge and practice of personal hygiene by public primary school pupils at Owerri west LGA. The questionnaire was administered to the respondents after a verbal consent was obtained. The respondents were allowed to fill the questionnaires themselves, after which they were collected back by the researcher. The data collection was conducted by the researcher with the aid of two research assistants during the process.

**Validity of Instruments**

The questionnaire was carefully prepared by the researcher and was scrutinized and approved by the researcher’s supervisor (face validity). Also, two other lecturers from the department of public health ascertained the validity to ensure that the questionnaire will obtain the objective of the research (Content Validity).

### Reliability of Instruments

Test-retest method was used to test the reliability of the questionnaire. Test retest reliability is a statistical technique used to estimate components of measurement error by repeating the measurement process on the same subjects (Larvrakas, 2008). The questionnaire was initially administered to respondents from a similar population and will be repeated. The data that was gathered from this research was analyzed to deem this study reliable. The questionnaire was pretested and chrombach Alpha test was performed to obtain a reliable coefficient of 0.8.

### Method of Data Collection

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### Method of Data Analysis

The researcher inputted the data gotten from the questionnaire into the computer using the statistical package for social sciences (SPSS version 23) for the statistical analysis of the study. Data was presented using frequency tables to compare variables where necessary. Descriptive statistics such as percentages, pie charts and frequency distribution tables were employed in characterizing the respondents.

### Ethical Consideration

The ethical approval to conduct this study was obtained from Department of Public health Local Ethics Committee Federal University of Technology Owerri. An introductory letter was obtained from the department as the researcher sought for the permission from the principal of the various primary schools. A verbal consent was obtained from all respondents in the study population after adequate explanation of the research benefits and risks. Anonymity was assured as names were not to be required at any stage of the study and the information obtained from the respondents were treated with utmost confidentiality.

### Results

A total of four hundred and twenty-seven (427) questionnaires were administered to the respondents and a total of four hundred and twenty-seven (427) questionnaires were retrieved from them.

**Table 1: Socio demographic Characteristics of the Respondents:** The table below disclosed that the majority of the informants, 41.2% (176) were between ages 8-10yrs. On the gender, 51.8% (221) of the respondents were female making the remaining 48.2% (206) male. The table also shows that majority of the informants, 90.6% (387) were of Igbo origin and just 2.1% (9) originated from the Yoruba ethnic group. The Hausa ethnic group is 2.3% (10), the minority group Ijaw is 2.3% (10) while the remaining 2.6% (11) included respondents from all other ethnic groups.

Majority of the respondents, 89.5% (382) were Christians, 6.3% (27) were Traditional worshippers and the least being 4.2% (18) was a Muslim. The last Socio demographic characteristics being the class, the table shows that the majority of 53.2% (227) belonged to Primary 4 followed closely by 28.1% (120) in primary 5, next in line being 18.7% (80) in Primary 6.

**Table 1: Socio demographic Characteristics of the Respondents**

Characteristics	Frequency	Percentage (%)
<b>Age:</b>		
5-7	34	8.0
8-10	176	41.2
11-12	148	34.6
13 and above	69	16.2
Total	427	100
<b>Sex:</b>		
Male	206	48.2
Female	221	51.8
Total	427	100
<b>Ethnicity</b>		
Igbo	387	90.6
Yoruba	9	2.1
Hausa	10	2.3
Ijaw	10	2.3
Others	11	2.6
Total	427	100
<b>Religion:</b>		
Christian	382	89.5
Islamic	18	4.2
Traditional worshippers	27	6.3
Total	427	100
<b>Class</b>		
Primary 4	227	53.2
Primary 5	120	28.1
Primary 6	80	18.7
Total	427	100

**Table 2: Knowledge of Personal Hygiene Practice among Respondents:** Table 2 below reveals the responses as regards personal hygiene practices. Majority of the respondents 57.8% (247) have heard about personal hygiene while just 42.2% (180) had not. Also, 46.8% (200) of the informants have heard about it from their teachers, 19.9% (85) from their parents, 20.1% (86) heard about personal hygiene from Television/Radio sets and 6.3% (27) from other sources, meanwhile a low 2.1% (9) obtained their knowledge from Magazines. 60.7% (258) of the respondents obliged to personal hygiene including bathing, washing your hands, brushing your teeth, etc while just 39.3% (168) believed otherwise. On the issue of sharing drinking cups without washing, 41.5% (177) didn't see it as a problem while a great 58.5% (250) understood sharing drinking cups without washing could cause ill health. 60.2% (257) of the respondents were positive to hand washing with or without soap being the same, while 39.8% (170) disagreed and understood there are differences washing their hands without soap and washing with soap. A majority of the respondents 65.3% (279) also wouldn't eat raw vegetables or fruits without washing because they believe it can cause infection while 34.7% (148) don't think it can cause infections. 35.8% (153) of the respondents believe it is more important to wash your hands before meals than after while 64.2% (274) said otherwise. On the issue of Human faces containing germs that can cause infections, 36.8% (157) agree while a large 64.2% (270) disagree.

**Table 2:** Knowledge of personal hygiene practice among Respondents

Variables	Frequency	Percentage (%)
<b>Heard about personal hygiene</b>		
Yes	247	57.8
No	180	42.2
Total	427	100
<b>Source of Information of Personal hygiene</b>		
Parents	85	19.9
Teacher	200	46.8
Books	20	4.7
TV/Radio	86	20.0
Magazine	9	2.1
Others	27	6.3
Total	427	100
<b>Personal Hygiene includes bathing, washing your hands, brushing your teeth etc.</b>		
Yes	259	60.7
No	168	39.3
Total	427	100
<b>Sharing of drinking cups without washing can cause health problem</b>		
Yes	250	58.5
No	177	41.5
Total	427	100
<b>Hand washing with or without soap after toilet can cause infection</b>		
No	170	39.8
Yes	257	60.2
Total	427	100
<b>Eating Raw Vegetables or fruits without washing can cause infection</b>		
Yes	279	65.3
No	148	34.7
Total	427	100
<b>Washing Hands before meal is more important than doing it after meal</b>		
Yes	153	35.8
No	274	64.2
Total	427	100
<b>Human feces contain germs that can cause infection</b>		
Yes	157	36.8
No	270	63.2
Total	427	100
<b>Sharing combs, nailcutter, handkerchief can transmit diseases among pupils</b>		
Yes	200	46.8
No	227	53.2
Total	427	100

**Hygiene Practices among Respondents**

The results in the table below show the responses to Hygiene practices. 61.6% (263) of the respondents always brush their teeth daily. 37.0% (158) replied with "sometimes" and a low 1.4% (6) doesn't brush at all. 57.4% (245) also affirmed they cut their nails always, 41.6% (178) said they do sometimes and the others never. 1.0% (4). 56.0% (239) of the respondents take their bath daily, 44.0% (188) takes a bath sometimes. When asked if the respondents wear washed clothes daily, 53.4% (228) said "always", 39.3% (168) replied with "sometimes" and 7.3%

(31) said "Never". 43.8% (187) of the respondents always ironed their clothes before wearing, 48.0% (216) ironed sometimes and 8.2% (35) never ironed their clothes before wearing. When asked about how often they changed their underwear, 60.0 % (256) said "always" followed by 39.6% (169) who replied with "sometimes" and 0.4% (2) who replied with "never". 54.3% (232) of the respondents obliged to cut hair "always", 42.9% (183) of them replied with "sometimes" and 2.8% (12) of the respondents never cut their hair. When asked how often informants wash your hair after cutting, a majority 58.5% (250) replied with "always" a good number 168 (39.3%) replied with "sometimes" and the least 2.1% (9) were negative. The respondents were also asked if they remove dirty from their nose, 47.8% (204) replied with "sometimes", who also affirmed they remove dirty from their nose with hand 51.3% (219) with "always" The 25.3% (108) who said "always" using a handkerchief too gave 46.1% (197) replied with "sometimes" and 28.6% (122) said "Never", Also, 52.2% (223) of the respondents affirmed they always wash their hands before eating, 44.0% (188) said "sometimes" and 3.8% (16) never washed their hands before eating. Upon the question of if they use soap to wash their hands after using the toilet, 47.5% (203) replied with "always", the majority being 43.6% (186) said "sometimes" and 8.9% (38) of the total told they never did. The respondents were asked if the use ashes to wash their hand 64.0% (273) replied "always" a good number 34.4% (147) replied with "sometimes" and 1.6% (7) replied "never" 36.5% (156) always washed their hands after handling live animals, 58.5% (250) replied with sometimes and the remaining 5.0% (21) never wash their hands. 32.8% (140) respondents said "Never". that they did not washed their hands before touching genitals, a large 38.9% (166) replied with "always" while 28.3% (121) said "sometimes".

**Table 3:** Hygiene practices among Respondents

Hygiene Practices	Frequency	Percentage (%)
<b>Do you Brush your teeth daily?</b>		
Always	263	61.6
Sometimes	158	37.0
Never	6	1.4
Total	427	100
<b>How often do you Cut your Nails?</b>		
Always	245	57.4
Sometimes	178	41.6
Never	4	1.0
Total	427	100
<b>Do you take your bath everyday?</b>		
Always	239	56.0
Sometimes	188	44.0
Never	0	0.0
Total	427	100
<b>Do you wear washed clothes daily</b>		
Always	228	53.4
Sometimes	168	39.3
Never	31	7.3
Total	427	100
<b>Do you iron your cloth before wearing?</b>		
Always	187	43.8
Sometimes	205	48.0
Never	35	8.2
Total	427	100
<b>How often do you change your under wears?</b>		

Always	256	60.0
Sometimes	169	39.6
Never	2	0.4
Total	427	100
<b>How often do you cut your hair?</b>		
Always	232	54.3
Sometimes	183	42.9
Never	12	2.8
Total	427	100
<b>How often do you wash your hair after cutting?</b>		
Always	250	58.5
Sometimes	168	39.3
Never	9	2.1
Total	427	100
<b>Do you use hand to remove dirty from your nose?</b>		
Always	219	51.3
Sometimes	204	47.8
Never	4	0.9
Total	427	100
<b>Do you use handkerchief to remove dirty from your nose?</b>		
Always	108	25.3
Sometimes	197	46.1
Never	122	28.6
Total	427	100
<b>Do you wash your hands before eating?</b>		
Always	223	52.2
Sometimes	188	44.0
Never	16	3.8
Total	427	100
<b>Do you use soap to wash hands after using the toilet?</b>		
Always	203	47.5
Sometimes	186	43.6
Never	38	8.9
Total	427	100
<b>How often do change your pad when menstruating?</b>		
Always	239	56.0
Sometimes	188	44.0
Never	0	0.0
Total	427	100
<b>Do you wash your hands after handling live animals?</b>		
Always	156	36.5
Sometimes	250	58.5
Never	21	5.0
Total	427	100
<b>Do you wash your hands after touching genitals?</b>		
Always	166	38.9
Sometimes	121	28.3
Never	140	32.8
Total	427	100
<b>Do you use tissue to clean your button after using toilet?</b>		
Always	118	27.6
Sometimes	227	53.2
Never	82	19.2
Total	427	100

**Barriers Influencing the Practice of Personal Hygiene among Respondents**

Table 4: below focused on the barriers influencing the practice of personal hygiene among respondents. 57.8% (247) of the respondents didn't lack education on personal

hygiene while a small 30.2% (129) affirmed they lacked basic education on hygiene. 83.4% (356) lacked adequate water supply while 16.6% (71) didn't. When asked if they lacked time, 40.5% (173) replied "No" and 59.5% (254) said "Yes". 60.2% (257) didn't accept their religious beliefs were a barrier to personal hygiene while 39.8% (170) was affirmative. Laziness didn't affect some 55.5% (237) of the respondents while 44.5% (190) were lazy to practice personal hygiene.

**Table 4:** Barriers influencing the practice of personal hygiene among Respondents

Barriers	Frequency	Percentage
<b>Lack of Education</b>		
Yes	247	69.8
No	180	30.2
Total	427	100
<b>Inadequate water supply</b>		
Yes	356	83.4
No	71	16.6
Total	427	100
<b>Lack of time</b>		
Yes	254	59.5
No	173	40.5
Total	427	100
<b>Religious beliefs</b>		
Yes	257	60.2
No	170	39.8
Total	427	100
<b>Laziness</b>		
Yes	237	55.5
No	190	44.5
Total	427	100

**Conclusion**

Hygiene practices are vital to one's health and well-being especially in the prevention of the communicable diseases. Findings from this study showed that public primary school pupils are aware of personal hygiene practice thus, it implies that school-based health education improved the personal hygiene practice of the pupils. There is a need for regular reinforcement to sustain the gains particularly with areas of assessment in the study showing that sanitary provisions are of water is lacking. Poor hygiene practice contributes account for majority of the illnesses together with other infectious diseases among school children. Overall finding from the study concluded that primary school pupils in Owerri West LGA have a fair knowledge of hygiene practice among them.

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