



## Personal Health and Hygiene of Children in Maiduguri Metropolis of North –Eastern Nigeria

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### ABSTRACT

This study determined attitude of personal health of primary schools pupils in Maiduguri Metropolis in Borno State of North-Eastern Nigeria. The cross-sectional survey research design was employed. Maiduguri Metropolitan Council has thirty seven primary schools with enrolment population of sixty eight thousand, nine hundred and twenty four pupils. Dip hand bowl random sampling procedure was employed to select the schools for this study, eight (8) schools while Stratified sampling and Dip hand bowl sampling procedure were used to identify and select each class that was sampled and Proportionate sampling procedure was employed to assign number of questionnaire to be administered to each school and classes selected. Descriptive statistics of frequency and percentage to explain the demographic characteristics while inferential statistics of chi-square was employed to test the hypotheses at 0.05 alpha level of significance. Significant difference in attitudes towards personal health of Primary School Pupils and difference between male and female primary school pupils of Maiduguri Metropolitan Council, Borno State. Based on the findings stakeholders of the primary schools in Maiduguri Metropolitan Council should provide facilities that are adequate and suitable for promotion of good personal health practices. For example hand washing facilities (bowl, water, soap and hand sanitizer).

**Keywords:** Attitude, Personal Health, Primary School Pupils

### INTRODUCTION

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity World Health Organization (WHO, 2010). Health is also the science of preserving and promoting the well-being of both the individual and the community. It has many aspects: personal health (proper living habits, cleanliness of body and clothing, healthful diet, a balanced regimen of food, cleanliness, and ventilation of the home); public health (supervision of water and food supply, containment of communicable disease, disposal of garbage and sewage, control of air and water pollution); industrial health (measures that minimize occupational disease and accident); mental health (recognition of mental and emotional factors in healthful living). WHO promotes health practices on an international level (Breslow-Lester, 2009).

Biswas, Roy and Das (1990) stated that health attitude is formed through health knowledge. Health attitudes help shape societies, and, improve health behaviour which encourage health practices. Health practices are practices that prevent diseases and promote health, these practices or activities are; sleep and rest, oral care, body grooming, face, ear, hair, eye cleanliness, good drinking water, control of immediate environment, and good handling of food. All these are personal health practices that needs to be taught to the primary school pupils, because when health practices are taught during childhood mostly by practices, they are continued to adulthood and these habits have direct impact on the child's future health, Jadad and Grady (2008) reported that inculcating these attitudes and practices in pupils will enhance the attainment of primary education objectives since with the wellness of the pupils, they will attend to, continue school and their performance will increase. But when personal health are not properly taken

care of, they fall sick and will not attend school and this leads to academic failure which also leads to in attainment of educational objectives. The attitude of primary school pupils in Maiduguri Metropolitan Council, need to be determined in the light of these objectives.

1. The attitude influencing personal health of primary school pupils in Maiduguri Metropolitan Council, Borno State.
2. Differences in personal health attitude of male and female pupils in primary schools of Maiduguri Metropolitan Council, Borno State.

### Hypotheses

The hypotheses tested for this study were:

- H<sub>01</sub>: There is no significant difference in attitude towards personal health between male and female primary school pupils in Maiduguri Metropolitan Council, Borno State.
- H<sub>02</sub>: There is no significant influence in attitude towards personal health of primary school pupils in Maiduguri Metropolitan Council, Borno-State.

### METHODOLOGY

The cross-sectional survey research design was employed for this study. Frankfort and Nachmias (2008) demonstrated that cross-sectional design is a research design used most predominantly in survey research because it facilitates the gathering of information about a segment of that very population from where generalizations can be inferred. Therefore, cross-sectional survey research design was considered appropriate for this study because it gives current information on knowledge, attitude and practice of personal health among primary school pupils in Maiduguri Metropolitan Council, Borno State.

Nwana (1990) opined that this design facilitates the description of situation in its present state and solicits information directly from the respondents. Gemson (2013) stated that the cross-

sectional research designs permits the description of phenomena as they exist in their natural setting.

### Population and Sample

The population for this study consisted of all the pupils in public primary schools in Maiduguri Metropolitan Council, Borno State. Maiduguri Metropolitan Council has thirty seven primary schools with enrolment population of sixty eight thousand, nine hundred and twenty four pupils. (Thirty six thousand, two hundred and sixty eight male pupils, thirty two thousand, six hundred and fifty six female pupils). (Local Education Authority Maiduguri 2014). The sample size was determined using statistical formula of Taro Yamane. Uzoagulu (1998) explained that when a number of population to be considered for a study is known, it is a finite population and the statistical formula of Taro Yamane can be used to calculate the number of participants in the study. Multistage sampling procedure was adopted for the study.

Gemson and Kyamru (2012) stated that multistage sampling procedure is the process where sampling is done in stages in which each stage may involve different sampling techniques. The sampling procedure was successfully employed by Iyoke *et al* (2006) to survey teachers in Enugu Nigeria in order to examine whether socio demographic characteristics determine teachers attitude towards adolescents sexuality education.

- i. Dip hand bowl random sampling procedure was employed to select the schools for this study, 8 (eight) schools were selected which represents 20% of the schools in Maiduguri Metropolitan Council. According to Gemson (2013) 20% of a population can represent the entire population of the study area.
- ii. Stratified sampling and Dip hand bowl sampling procedure were used to identify and select each class that was sampled. That is, the classes were stratified as Lower Basic 1, 2 and 3. Basic 1, 2 and 3. Each class consist of streams, that is, a, b, c and d, in each class, one stream was selected using dip hand bowl.
- iii. Proportionate sampling procedure was employed to assign number of questionnaire to be administered to each school and classes selected, the procedure of the proportionate sampling method employed is in appendix 11 page 98. And a total of 398 respondents were used in this study calculated using Taro Yamane formula.

### Research Instrument

The research instrument employed for data collection in this study was self-developed questionnaire that elicited responses from the pupils on attitude of personal health in selected primary schools in Maiduguri Metropolitan Council. The questionnaire contained closed ended question items and was divided into four sections. Section A dealt with socio-demographic information, sections B with attitude of primary school pupils towards personal health. The modified Likert scale of response mode of very high knowledge; high knowledge; average knowledge; low knowledge; strongly agreed; agreed; strongly disagreed and disagreed with scores of 4, 3, 2 and 1 respectively was employed. Copies of the drafted

questionnaire were given to experts in the Department of Physical and Health Education, University of Maiduguri for relevant inputs. This has helped in improving the quality of the instrument for data collection. The content validity of the instrument was determined by the researcher's supervisor and other experts in and outside the Department of Physical and Health Education, University of Maiduguri. The self-developed questionnaire was tested to determine the reliability by using test-retest-method, this was carried out in Gwange two (2) primary school in Gwange ward Maiduguri Metropolitan Council Borno State within two weeks interval of administration. The Pearson's Product Moment Correlation was employed to calculate the reliability coefficient, and 0.81 was obtained making the instrument reliable.

### Method of Data Analysis

The data collected for this study were analysed using descriptive statistics of frequency count, percentage, mean, and standard deviation to explain the demographic characteristics of the respondents and to answer the research questions. The chi-square was employed to test the hypotheses at 0.05 alpha level of significance.

### DATA ANALYSIS AND RESULTS

Table 4.1 which is on demographic information of the respondents reveals that 215 (55.0%) of the respondents are male while 174 (44.7%) of the respondents are female. This table shows more male respondents than female respondents. This could be due to less enrolment of female pupils in schools in Maiduguri Metropolitan Council. Table 4.1 further reveals that 148 (38.0%) of the respondents are within the ages of 5-7 years, 129 (33.2%) represent 8-10 years of the respondents. This implies that there are more respondents between the ages of 5-7 years. The table further reveals the classes of respondents. Seventy six (19.5%) respondents were in LB1, 89 (22.9%) in LB2 of the respondents, 61(15.7%) represents LB3 of the respondents while 69 (17.7%) represents B1 of the respondents. The table also shows that 53(12.9%) represents B2 of the respondents while 41 (11.3%) represents B3 of the respondents. This implies that LB2 has the highest number of classes. The table also revealed the schools of the respondents. Seventy one (18.0%) represents respondents of Maduganari primary school, 27 (6.9%) represents Bulabulin Primary School, while 123 (31.6%) represents Yerwa Practicing Primary school, 10 (2.6%) represents Kurikassama Primary School, also 36(9.3%) represents Abbaganaram Primary school. others are 25(6.4%) which represent Mafoni primary school, 73 (18.8%) representing Gwange primary school and 24 (6.4%) which represent Lamisila primary school. This indicates that Yerwa Practicing Primary School which has 123(31.6%) has the highest number of pupils while Kirikasama primary school with 10 (2.6%) has lowest number of pupils. **Hypothesis 1:** There is no significant difference in attitude towards personal health between male and female of primary school pupils in Maiduguri Metropolitan council, Borno State based on gender.

**Table 1:**Demographic Information of the Respondents

Options	Frequency	Percentage (%)
<b>Sex</b>		
Male	215	55.3
Female	174	44.7
<b>Age</b>		
5-7	148	38.0
8-10	129	33.2
11-13	112	28.8
<b>Class</b>		
LB1	76	19.5
LB2	89	22.9
LB3	61	15.7
B1	69	17.7
B2	50	12.9
B3	41	11.3
<b>Schools</b>		
Manduganari Pri. Sch.	71	18
Bulabulin Pri. Sch.	27	6.9
Yerwa Practicing Pri. Sch.	123	31.6
Kirkasama Pri. Sch.	10	2.6
Abbaganaram Pri. Sch.	36	9.3
Mafoni Pri. Sch.	25	6.4
Gwangel Pri. Sch.	73	18.8
Lamisila Pri. Sch.	24	6.2

**Key:** LB = Lower Basic 1, 2 and 3, B = Basic 1, 2 and 3  
Table 2

**Chi-square summary on attitude between male and female towards personal health of primary school pupils in Maiduguri Metropolitan council, Borno State**

Variables	SA	A	D	SD	Total	X <sup>2</sup>	df	Prob	Decision
Male	59(66.32)	92(100.03)	35(28.74)	29(19.89)	215	13.818	3	0.0001	S
Female	61(53.67)	89(80.96)	17(23.25)	7(16.10)	174				
Total	102	181	52	36	389				

(X<sup>2</sup>cal=13.818; X<sup>2</sup>critical=7.815; P<0.05)

Table 2 is a summary of chi-square on attitude between male and female towards personal health of primary school pupils in Maiduguri Metropolitan Council, Borno State. The results in the table revealed that the observed chi-square for the test is 13.818 at 3 degree of freedom, while the critical value is 7.815. The observed level of significance in the test is 0.0001 (P < 0.05). With these observations, the null hypothesis is rejected. This implies that there is significant

difference in attitude towards personal health between Male and female primary school pupils in Maiduguri Metropolitan council, Borno State.

**Hypothesis 2:** There is no significant influence in attitude towards personal health of primary school pupils in Maiduguri Metropolitan council, Borno State based on age.

**Table 3:** Summary of chi-square on influence in attitude towards personal health of primary school pupils in Maiduguri Metropolitan council, Borno State.

Variables	SA	A	D	SD	Total	X <sup>2</sup>	df	Prob	Decision
5-7	51(46.79)	59(64.67)	28(24.73)	10(11.79)	148	21.433	6	0.0001	S
8-10	39(35.41)	50(56.37)	27(21.55)	13(10.28)	129				
11-13	33(35.41)	61(48.94)	10(18.72)	8(8.92)	112				
Total	123	170	65	31	389				

(X<sup>2</sup>cal=21.433; X<sup>2</sup>critical=12.592; P<0.05)

Table 4.9 is a chi-square summary on attitude towards personal health of primary school pupils of Maiduguri Metropolitan Council, Borno State. In the table, the observed chi-square for the test is 21.433 at 6 degree of freedom, while the critical value is 12.592. The observed level of significance in the test is 0.0001 ( $P < 0.05$ ). With these observations, the null hypothesis is rejected. This implies that there is significant influence in attitude towards personal health of primary school pupils in Maiduguri Metropolitan council, Borno State.

## DISCUSSION

On the attitude of pupils towards personal health, the results showed positive attitude towards personal health, but have some negative attitude towards some personal health for example, attitude towards washing hairs regularly, trimming nails regularly to prevent germs entering the body were poor. The findings supported the result of Oyibo (2012) who reported that average knowledge and practice scores related to basic personal health among school children were 74.6% in girls and 54.9% in boys, the result reveals that high level of knowledge related to basic personal health exhibited by the children was not totally reflective of their practices of basic personal health as little percent of them wear clean cloth, wash their hands with soap and antiseptic after using the toilet or playing. He also carried out physical inspection of the children and his results revealed that half of them had dirty hair, dirty uniform and dirty nails respectively. It was then concluded that sizeable number of the children had adequate knowledge related to personal health, their practices related to same was poor. The result of this study contradict the findings of Federal Democratic of Ethiopian Ministry of Health (2009) who found in their study that participants in rural Ethiopia had poor status regarding knowledge, attitude and practices (KAP) of health.

This result also revealed significant difference in the attitude between male and female primary school pupils towards personal health. This is in line with the findings of Zuraidah, Hashim and Yahya (2011) who found that females have been consistently shown to have higher environmental conscious attitudes than males. They also reported that the common reason for gender difference is the different socialization patterns between boys and girls. This has been substantiated by the result of these findings as the chi-square confirmed that there is significant difference in the observed chi-square value of 13.818 and the critical value of 7.815 with p-value of 0.0001 less than 0.05 alpha level of significance. American Association, (2010) concluded that women have a better understanding about what good health entails along with a more

positive attitude towards visiting the dentist or dermatologist, Hassan, Nimmi, Vimal, Youstra and Nassr (2015) also reported in their findings that women have more positive dental health attitude and behaviour than men as found in this study. The conventional way to promote hand washing from top to down, health focused campaigns that raise the spectre of disease and death have little success in change people's behaviour. Informative research a thorough study of the factors that may influence different people within a community to wash their hands (or not) is a critical first step in any hygiene promotion campaign. Only by knowing what people do now, what they value and which benefits of hand washing appeal to them can design an effective campaign (Bowen *et al.*, 2007). Some critical times at which hand-washing must be employed include, after using the toilet, attending to a sick person, handling raw meat, fish or poultry, after handling garbage, treating a wound or cut, contact with domestic animals, before food preparation and before eating (CDC, 2009). Hygienic measures, including hand washing with soap before meals and after use of restrooms, have been found to prevent diseases (WHO, 2012). Hand washing, if regularly and properly practiced by primary school pupils will go a long way in reducing the prevalence of infectious diseases, hospital admissions due to these diseases and also mortality, thereby making them grow well and healthy (Curtis and Cairncross, 2003). Programs for the reduction of morbidity and mortality must include hand washing to prevent contamination of food. However, altitude of student towards personal hygiene also improved significantly after education. The practice of personal hygiene also revealed improvement. Baxter and Clearly (2002) also found that, with the implementation of the school health education programme with the emphasis on improvement of personal hygiene, the proportion of children with clean and cut nails, clean hands and hair increased significantly. Thus, the ultimate goal of health education intervention is to positively influence health status and bring about behavioural changes regarding health. Previous hand hygiene studies have indicated that children with proper hand washing practices are less likely to report gastrointestinal and respiratory symptoms. Schools should provide for hygiene education to kindergarten and early grade school children to supplement the training provided by parents and guardians, to ensure that all children learn at an appropriate age how to protect themselves and others from preventable exposure to illness and other hygienic hazards. Hand washing with soap has been reported to reduce diarrhea morbidity by 44% and respiratory infection by 23% (Aiello, Coulborn, Perez and Larson, 2008).

## RECOMMENDATIONS

1. Discourage attitudes that do not promote good personal health.
2. The stakeholders of the primary schools in Maiduguri Metropolitan Council should provide facilities that are adequate and suitable for promotion of good personal health attitudes. For example hand washing facilities. (bowl, water, soap and hand sanitizer).
3. The stakeholders should redirect their attention towards attitude of the male primary school pupils in Maiduguri Metropolitan Council, in order to improve their personal health.

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