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Evaluating Primary School Teachers' Knowledge and Practices of School Health Programme in Delta State: Implications for Healthy Living of Pupils

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Abstract

The study assessed the knowledge and practices of School Health Programmes among teachers in public primary schools in Oshimili North Local Government Area, Delta State, Nigeria. It adopted descriptive survey. The target population consisted of all 225 teachers in the existing 30 public primary schools. A sample of 144 teachers was selected through simple random sampling, using the raffle draw method to ensure equal opportunity for participation. Stratified random sampling was also employed to select 18 schools from rural and urban areas, with 8 teachers randomly chosen from each selected school. The research instrument was a structured questionnaire divided into two sections: Section A focused on respondents' socio-demographic data, while Section B addressed the research questions with 43 items. The validity of the instrument was ensured by experts in Tests and Measurement and Primary Education, while reliability was confirmed through a test-retest method, yielding a high correlation coefficient. Data collection involved obtaining permissions and distributing the questionnaire, with a high response rate achieved. Descriptive statistics were used to analyze

the data, while inferential statistics (chi-square) tested the hypotheses at a 0.05 significance level. The findings provide valuable insights into the teachers' knowledge and practices regarding school health programmes, contributing to improved implementation strategies in the region. Recommendations were made among others which includes Government should organize workshops and seminars to deepen teachers' understanding of health appraisal services and provide regular updates on health policies, guidelines, and tools to keep teachers informed. And Government should also develop and implement training programs focused on school health instruction for teachers and include school health education as a core component in teacher professional development programs.

Keywords:

School health program, Health education, health instructions, skill-based, nutrition, primary school, community.

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Introduction

Schools are critical institutions where children acquire knowledge, build character, establish values, and prepare for the future as global citizens. Beyond academics, schools play a vital role in the physical, mental, social, and emotional well-being of students (Bosede, Obembe& Adebayo, 2022). The School Health Programme (SHP) is a structured initiative designed to enhance students' health and well-being by integrating preventive and curative health services in the school setting. It is based on the premise that good health positively influences learning and that the state has a responsibility to ensure children's healthy development (Sorensen, Williams, & Carter, 2021). Additionally, the programme promotes peer-to-peer and community-based health education.

The SHP encompasses School Health Services (SHS), which include medical treatment, health appraisals, disease control, nutritional services, and health education. It operates through an interdisciplinary approach, involving teachers, healthcare workers, counselors, administrators, and families in promoting student health (Darlington, Violon, &Jourdan, 2018; Akinsola, Adeyemi, &Alabi, 2018). Effective implementation of SHP is crucial because children's health influences their academic performance and future contributions to society. In Nigeria, SHP is recognized as a key tool for achieving national and global educational and health-related development goals (UNESCO, 2022). However, despite previous calls for stronger implementation (NERC, 2007), the programme's execution remains unsatisfactory in various parts of the country (Olumide&Owoaje, 2017). In contrast, industrialized nations have made significant progress in SHP implementation (Basch, 2020).

The World Health Organization (WHO, 2020) defines a health-promoting school as one that fosters a healthy environment for learning and working while encouraging stakeholders to make informed health-related decisions. Research has shown that SHP is one of the most cost-effective strategies for improving public health and societal well-being (Lee, Park, & Kim, 2023). The programme has evolved from basic medical check-ups to a comprehensive framework integrating health services, policies, and educational strategies aimed at fostering lifelong healthy habits (Nwaogu, Chukwu, &Okeke, 2021). The National Health Policy (2002) also prioritizes SHP by advocating preventive health education, routine health screenings, and the promotion of health-seeking behavior (Adebayo &Onadeko, 2016).

The success of SHP depends heavily on collaboration between the education and public health sectors, with teachers playing a central role in implementation. As influential community figures, teachers serve as key agents of change, shaping students' attitudes toward health and well-being (Bosede, Obembe& Adebayo, 2022). Teachers are particularly vital in rural areas where healthcare services are limited, making their engagement in SHP even more crucial. Effective teacher participation requires proper training, as their perceptions and knowledge of SHP significantly impact the program's success.

Despite its importance, SHP has been largely neglected in many developing countries (Bisi-Onyemaechi, Akani, Ikefuna, Tagbo, &Chinawa, 2018). Poor school sanitation, limited health education, and the prevalence of infectious diseases pose serious challenges (Lee, Park, & Kim, 2023). In countries with high child mortality rates, school-age children often struggle with the long-term effects of childhood diseases, underscoring the need for better school health interventions (UNESCO, 2022). Basch (2020) argues that improving school health services is crucial for helping children reach their full potential and become productive citizens.

Research indicates that the implementation of SHP in Southwest Nigeria has been suboptimal due to inadequate resources, misconceptions about health, lack of commitment from non-health teachers, and low health literacy among educators (Bisi-Onyemaechi et al., 2018). Other barriers include insufficient training, lack of confidence among teachers, resistance from school administrators, weak support from NGOs, and the absence of protective health policies in schools (Day, Sahota, & Christian, 2019). Surveys reveal that many teachers lack adequate knowledge about SHP, reinforcing the need for targeted training programs (Day et al., 2019).

The school-age years are a crucial period for growth and development, and the health status of school children serves as an indicator of national development (Okonkwo & Chukwuma, 2021). Research has consistently shown a strong link between student health and academic performance (Basch, 2020). SHP ensures that students receive necessary health support tailored to their individual needs, promoting lifelong healthy habits (Adeyinka, Muhajarine, Petrucka, & Isaac, 2020).

To ensure effective SHP implementation, teachers must be well-trained and competent in delivering health education and services. In Nigeria, the lack of an in-depth

analysis of teachers' current knowledge and practices hinders the program's effectiveness. Therefore, this study was conducted to assess primary school teachers' knowledge and involvement in SHP and its implications for the health and well-being of pupils in Oshimili North Local Government Area of Delta State. The findings will help strengthen SHP

Statement of Problem

School children experience a variety of health issues that impede their regular growth and development, especially in developing countries. The majority of disorders that result in illness and morbidity later in life have their origins in small ailments that were disregarded during this time. If school health initiatives are successful, the majority of communicable disease outbreaks in our nation might be avoided. This would mean that children could be appropriately trained about disease prevention from an early age. Learning has a tendency to be transmitted from child to parent and to the society. The illness and death rates of school children are among the highest in the world, according to a 2009 health assessment by Eide, Showalter, and Goldhaber on the relationships between health programs and academic achievement in schools. Merely 40% of school-age children are determined to be defect-free and in good health, while 33% suffer from malnourishment, 3.4% have visual problems, and 20% have tuberculosis and other illnesses. Numerous infectious and non-infectious illnesses have swept through our society, including the Covid-19 pandemic, Ebola, chicken pox, HIV/AIDS, lazar fever, and numerous others. And while this has had a significant impact on the growth and development of the country, school health programs can help prevent these silent killer diseases. So, the question is: Does this imply that there isn't a school health program in the curriculum or that the health education teachers don't know enough to make a difference in the students' lives?

Thus this study seeks to evaluate primary school teachers' knowledge and practices of School Health Programme and it's implication on healthy living of pupils' in Oshimili North Local Government Area of Delta State. Nigeria.

Generally, the purpose of this study is to evaluate the knowledge and practices of School Health Programmes and its implication on healthy living of pupils in Oshimili North Local Government Education Authority, Delta State. Specifically, the study seeks to:

i. Assess the extent of teachers` knowledge of health appraisal services of pupils in Primary schools in Oshimili North Local Government Area of Delta State.
ii. ascertain the extent of teachers' knowledge of school health instructions in Primary schools in Oshimili North Local Government Area of Delta State
iii. determine the extent of teachers' knowledge of nutritional needs of the pupils in Oshimili North Local Government Area of Delta State
iv. evaluate the extent of teacher's knowledge of practice of good community relation and school health in Oshimili North Local Government Area of Delta State
v. Ascertain the extent of teachers' knowledge of skills-based method of teaching in the classroom.

Research Questions

For the purpose of the study the following research questions will be raised:

1. What is the extent of teachers` knowledge of health appraisal services of pupils in primary schools in Oshimili North Local Government Area of Delta State?
2. What is the extent of teachers' knowledge of school health instructions in primary schools in Oshimili North Local Government Area of Delta State?
3. What is the extent of teachers' knowledge of nutritional needs of the pupils in Oshimili North Local Government Area of Delta State?
4. What is the extent of teacher's knowledge of good community engagement in school health in Oshimili North Local Government Area of Delta State?
5. What is the extent of teachers' knowledge of skills-based method of teaching in Oshimili North Local Government Area of Delta State?

Hypothesis

The following hypotheses were formulated in line with the purpose of the study and tested 0.05 level of significance

1. There will be no significant difference between the extent of teachers' knowledge of practice of school health appraisal services and knowledge of school health instructions in Oshimili North Local Government Area of Delta State
2. There will be no significant difference between the extent of teachers' knowledge of nutritional needs of the pupils and knowledge of practice of good community relation and school health in Oshimili North Local Government Area of Delta State
3. There will be no significance difference between teacher's knowledge of practice of skill-based of teaching and knowledge of school health instructions in Oshimili North Local Government Area of Delta State.

Methodology

The study was carried out in Oshimili North Local Government of Delta State.The target population for the study consisted of the entire teachers (male and female) in public primary schools in Oshimili North Local Government Area of Delta State, which consisted 225 teachers from the existing 30 primary schools The study adopt the Simple Random sampling technique to gather responses from respondents with regard to the knowledge and practices of School Health Programmes in Oshimili North Local Government Education Authority, Delta State. Raffle draw was adopted as a method of selecting samples from the population, where serial numbers of the elements in the sampling frame was recorded on pieces of papers folded and shuffled thoroughly before respondents was asked to pick at once. This technique gives the respondents equal opportunity of being selected thereby reducing the bias effect that may interfere with the validity and reliability of the study. Hence, the sample size of this study is one hundred and forty- four (144) teachers which were selected from the total number of teacher's population of 225 through the use of simple sampling techniques. Similarly, stratified random sampling technique were used to select the eighteen (18) schools from the 30 existing schools in the local Government, from the rural

and urban areas of this local Government. This shows that eight (8) teachers were randomly selected from eighteen (18) selected school. **A** descriptive survey design was used for this study. This design is a useful way of obtaining information about people's opinions, attitudes, preferences and experiences.

The instrument for data collection was a structured questionnaire which was developed by the researchers. The questionnaire was divided into two (2) sections as follows:

Section A: This section seeks for social-demographic data of respondents comprising 6 questions.

Section B: This section consisted of 43 items based on the purpose of the study.

The instrument was face validated by experts in the field of Test and Measurement, and Primary Education, who ensure that the questions in the research instrument were relevant to the topic and met the research objectives, provided answers to the research questions and easily understood by the respondents.Test re-test method were used to ensure reliability of the research instrument. This was done on one group population but in a different setting and involved around ten percent (10%) of the total sample size. The research instrument was administered on teachers who remained unaware of the purpose of the test. This same instrument was then re-administered 2 weeks later, to the same set of teachers to test for reliability of the instrument. The reliability index was calculated using the Pearson's Product Moment Correlation Statistics.

The questionnaires were administered to the primary school teachers by systematically distributing them among the targeted respondents. The data collection process was facilitated by the assistance of five research assistants, who played a crucial role in ensuring the proper administration of the instrument. Furthermore, the researcher took meticulous measures to guarantee that all distributed copies were accurately accounted for and retrieved.The data collected was analyzed using mean and standard deviation for the research questions. To test the hypotheses, the researcher made use of t-test at 0.05 level of significance.

Research Analysis

Analysis of Demographic Data

Table 1: Frequency Count and Percentage Ratings of Educational Qualification of Respondents

Highest Educational Qualification	**Frequency (*f*)**	**Percentage *(%)***
NCE	16	11.1
B. Ed	122	84.7
Med	6	4.2
Total	**144**	**100**

Table 1 presented frequency count and percentage ratings on respondents' highest academic qualification. Of 144 respondents, the majority of respondents hold a Bachelor of Education (B. Ed) degree (84.7%), followed by those with NCE (National Certificate in Education, 11.1%). Only a small percentage (4.2%) have a Master's in Education (M. Ed). This distribution suggests that most respondents have basic to moderate qualifications in education and could adequately respond to the research instrument without distortion.

Table 2: Frequency Count and Percentage Ratings of Age Distribution of Respondents

Age Group	Frequency (*f*)	Percentage *(%)*
25-35	6	4.2
36-45	76	52.8
46-55	34	23.6
56-59	28	19.4
60 & above	0	0
Total	**144**	**100**

Table 2 showed age distribution of respondents. Over half (52.8%) of respondents are between the ages 36-45, with the second largest age group being 46-55 (23.6%). There are very few younger respondents (4.2% in the 25-35 range) and none aged 60 and above. This suggests that the teaching workforce in this area is predominantly middle-aged, with limited representation from younger and older age groups.

Table 3: Frequency Count and Percentage Ratings of Sex Distribution of Respondents

Sex	Frequency (*f*)	Percentage *(%)*
Male	41	28.5
Female	103	71.5
Total	**144**	**100**

Table 3 revealed frequency count and percentage ratings of sex distribution of respondents in the study. The sample is primarily female (71.5%), with males constituting 28.5%. This gender distribution indicates that the teaching staff in the studied area is predominantly female.

Presentation of Results

Research Question 1: What is the extent of teachers` knowledge of health appraisal services of Pupils in primary schools in Oshimili North Local Government Area of Delta State?

Table 4: Mean and Standard Deviation Scores on Extent of Teachers` Knowledge of Health Appraisal Services of Pupils in Primary Schools in Oshimili North Local Government Area of Delta State

S/N	STATEMENT	*Mean*	*SD*	*Decision*
1	I am knowledgeable about the components of health appraisal services provided to pupils in primary schools	3.20	0.97	High extent
2	I understand the purpose of health screenings, such as vision and hearing tests, in primary schools	2.89	1.10	High extent
3	I am familiar with the procedures for identifying pupils with health issues that may impact learning	2.81	1.11	High extent
4	I have received training on how to conduct basic health assessments for pupils	3.04	0.94	High extent
5	I know how to refer pupils with health concerns to appropriate medical professionals or facilities	3.03	0.96	High extent
6	I am aware of the signs and symptoms of common health issues that may affect pupils' school performance	3.06	0.98	High extent
7	I understand the importance of maintaining health records for each pupil	3.05	1.04	High extent
8	I can identify the health appraisal services that are regularly conducted in primary schools	3.15	0.89	High extent
9	I am confident in my ability to support health-related interventions for pupils in need	2.79	0.99	High extent
10	I am informed about the role of health appraisal services in promoting pupils' well-being and academic success	2.33	0.96	Low extent
11	I understand the procedures for follow-up actions after identifying pupils with health concerns	2.66	1.05	High extent
12	I am aware of government policies or guidelines on health appraisal services in primary schools	2.96	1.10	High extent
Grand Mean and Standard Deviation Scores		**2.92**	**1.01**	**High Extent**

Table 4 revealed mean and standard deviation response scores on the extent of teachers` knowledge of health appraisal services of pupils in primary schools in Oshimili North Local Government Area of Delta State. Most items are above the 2.50 threshold, indicating confidence in areas such as knowledge of health appraisal components (M = 3.20, SD = 0.97), purpose of health screenings (M = 2.89, SD = 1.10), familiarity with procedures for identifying health issues (M = 2.81, SD = 1.11), and maintaining health records (M = 3.05, SD = 1.04). Notable high means with lower SDs (e.g., "I know how to refer pupils with health concerns to appropriate medical professionals," M = 3.03, SD = 0.96) show consistency in teachers' self-perceived ability to manage health referrals. The item "I am informed about the role of health appraisal services in promoting pupils' well-being and academic success" falls below the criterion mean (M = 2.33, SD = 0.96), indicating a lower understanding in this specific area. The grand mean score of 2.92 (SD = 1.01) suggests that teachers perceive themselves as having a high extent of knowledge about health appraisal services.

Research Question 2: What is the extent of teachers' knowledge of school health instructions inPrimary schools in Oshimili North Local Government Area of Delta State?

Table 5: Mean and Standard Deviation Scores on Extent of Teachers` Knowledge of School Health Instructions in Primary Schools in Oshimili North Local Government Area of Delta State

S/N	STATEMENT	*Mean*	*SD*	*Decision*
13	I am knowledgeable about the objectives of school health instruction in primary schools	1.66	0.87	Low extent
14	I understand the topics that should be covered in school health instruction, such as hygiene and nutrition	2.70	0.95	High extent
15	I am aware of the role of school health instruction in promoting healthy behaviours among pupils	1.92	0.93	Low extent
16	I know how to incorporate health education topics into my teaching practices	2.01	0.86	Low extent
17	I am familiar with the guidelines for delivering health instruction to primary school pupils	1.89	0.89	Low extent
18	I understand how school health instruction can impact pupils' overall well-being and academic success	1.90	0.99	Low extent
19	I am aware of the health risks that school health instruction seeks to address	1.90	1.05	Low extent
20	I have received training on the effective delivery of school health instruction	1.88	0.81	Low extent
21	I am knowledgeable about government policies regarding school health instruction for primary school pupils	2.13	1.08	Low extent
Grand Mean and Standard Deviation Scores		**2.00**	**0.94**	**Low Extent**

Table 5 showed the mean and standard deviation response ratings on the extent of teachers' knowledge of school health instructions in primary schools in Oshimili North Local Government Area of Delta State. Most items scored below 2.50, indicating gaps in knowledge regarding objectives (M = 1.66, SD = 0.87), role of instruction in promoting healthy behavior (M = 1.92, SD = 0.93), and knowledge of guidelines (M = 1.89, SD = 0.89). The item "I am knowledgeable about government policies regarding school health instruction for primary school pupils" has a slightly higher score (M = 2.13, SD = 1.08) but still falls short of the criterion mean. While they have moderate knowledge on certain topics, such as hygiene and nutrition, their understanding of instructional objectives, delivery guidelines, and policies on school health instruction is limited.

Research Question 3: What is the extent of teachers' knowledge of nutritional needs of the pupilsinOshimili North Local Government Area of Delta State?

Table 6: Mean and Standard Deviation Scores on Extent of Teachers` Knowledge of Nutritional Needs ofPrimary School Pupils in Oshimili North Local Government Area of Delta State

S/N	STATEMENT	*Mean*	*SD*	*Decision*
22	I am knowledgeable about the basic nutritional needs of primary school pupils	1.89	0.93	Low extent
23	I understand the role of proper nutrition in supporting pupils' learning and development	1.60	0.63	Low extent
24	I am familiar with guidelines on healthy eating habits to	2.29	1.03	Low extent

	promote among primary school pupils			
25	I can identify the essential food groups necessary for a balanced diet for pupils	3.25	0.87	High extent
26	I am aware of the signs of nutritional deficiencies that may affect pupils' health and performance	2.85	1.06	High extent
27	I understand the impact of malnutrition on pupils' physical and cognitive development	2.93	1.20	High extent
28	I am aware of government or school policies related to pupils' nutrition and meal programmes	1.94	0.89	Low extent
Grand Mean and Standard Deviation Scores		**2.39**	**0.94**	**Low Extent**

Table 6 revealed mean and standard deviation response ratings on the extent of teachers' knowledge of nutritional needs of the pupils in Oshimili North Local Government Area of Delta State. Several items (22, 23, 24, and 28) score below the 2.50 threshold, such as knowledge of basic nutritional needs (M = 1.89, SD = 0.93) and understanding the role of proper nutrition (M = 1.60, SD = 0.63). The item "I am aware of government or school policies related to pupils' nutrition and meal programmes" also falls below the threshold (M = 1.94, SD = 0.89). However, three items (25-27) were scored above 2.50. Higher SDs in items above the threshold suggest variability, with some teachers confident and others less sure, highlighting inconsistent knowledge about nutrition. The grand mean of 2.39 (SD = 0.94) shows that teachers have a low extent of knowledge regarding pupils' nutritional needs.

Research Question 4: What is the extent of teacher's knowledge of practice of good communityRelation and school health in Oshimili North Local Government Area of Delta State?

Table 7: Mean and Standard Deviation Scores on Extent of Teachers` Knowledge of Practice **of Good Community Relation and School Health in Oshimili North Local Government Area of Delta State**

S/N	STATEMENT	*Mean*	*SD*	*Decision*
29	I understand the importance of fostering good relationships between the school and the community to support pupils' health	1.95	0.86	Low extent
30	I am knowledgeable about community resources available to support school health services for pupils	1.86	0.91	Low extent
31	I am aware of strategies for engaging parents and community members in promoting pupils' health and well-being	2.90	1.21	High extent
32	I know how to collaborate with community health organizations to address pupils' health needs	2.59	1.13	High extent
33	I understand the role of school health services in strengthening the relationship between the school and the community	1.74	0.77	Low extent
Grand Mean and Standard Deviation Scores		**2.21**	**0.98**	**Low Extent**

Table 7 indicated mean and standard deviation response ratings on the extent of teacher's knowledge of practice of good community relation and school health in Oshimili North Local Government Area of Delta State. Most items (29, 30 & 33) scored below 2.50, such as understanding the importance of community relationships for pupil health (M = 1.95,

SD = 0.86), knowledge about available community resources (M = 1.86, SD = 0.91), and understanding the role of school health services in strengthening school-community relations (M = 1.74, SD = 0.77). However, only two items (31&32) scored above 2.50. Higher SDs here reflect substantial variability in teachers' comfort and familiarity with engaging community resources and strategies, pointing to inconsistent knowledge within this area.

Research Question 5: What is the extent of teachers' knowledge of practice of skills-based Method of teaching in Oshimili North Local Government Area of Delta State?

Table 8: Mean and Standard Deviation Scores on Extent of Teachers` Knowledge of Practice of Skills-Based Method of Teaching Pupils in Primary Schools in Oshimili North Local Government Area of Delta State

S/N	STATEMENT	*Mean*	*SD*	*Decision*
34	I am knowledgeable about the skill-based approach to teaching health instruction to pupils	3.15	0.90	High extent
35	I understand how to develop pupils' practical skills in health-related topics, such as hygiene and safety	2.79	1.15	High extent
36	I am aware of various skill-based teaching methods that can be applied in health instruction	2.68	1.19	High extent
37	I know how to engage pupils in hands-on activities to reinforce health knowledge and practices	2.56	1.26	High extent
38	I understand the importance of using interactive methods to teach health concepts effectively	3.03	1.01	High extent
39	I am familiar with techniques for assessing pupils' health-related skills, such as proper handwashing or balanced diet choices	2.99	0.93	High extent
40	I know how to adapt health instruction to match the skill levels of different pupils	3.05	1.00	High extent
41	I am confident in using role-playing, simulations, or demonstrations to teach health topics	1.97	0.85	Low extent
42	I understand how to incorporate real-life scenarios to make health lessons relevant and practical for pupils	2.31	1.14	Low extent
43	I am aware of government or school policies that support skill-based methods in health instruction	2.38	1.11	Low extent
Grand Mean and Standard Deviation Scores		**2.69**	**1.05**	**High Extent**

Table 8 indicated mean and standard deviation response ratings on the extent of teachers' knowledge of practice of skills-based method of teaching in Oshimili North Local Government Area of Delta State. Most items (34-37) were rated above the criterion mean, such as knowledge of skill-based teaching (M = 3.15, SD = 0.90), using hands-on activities (M = 2.56, SD = 1.26), and using interactive methods (M = 3.03, SD = 1.01). Other high-rated items (38-40) include "I understand the importance of using interactive methods to teach health concepts effectively" (M = 3.03, SD = 1.01) and "I am familiar with techniques for assessing pupils' health-related skills" (M = 2.99, SD = 0.93). Some items (41 - 43) fall below 2.50. The higher SD values across many items indicate substantial variability in responses, which implies differences in teachers' comfort levels with skills-based methods.

Test of Hypotheses

Hypothesis 1: There will be no significant difference between the extents of teachers' knowledge of practice of school health appraisal services and knowledge of school health instructions in Oshimili North Local Government Area of Delta State

Table 9: Summary of Paired Sample t-test Comparing Extent of Teachers' Knowledge of Practice of School Health Appraisal Services and Knowledge of School Health Instructions in Oshimili North Local Government Area of Delta State

Measure	N	*M*	*SD*	*T*	*df*	*p*	95% *CID*
Teachers' knowledge of practice of School health appraisal services (Cluster A)		34.9645	11.60259				
Teachers' knowledge of school health instructions (Cluster B	141	17.9929	8.02985	31.150	140	0.000	
Difference (Cluster A - B)		16.97163	6.46965				
							(15.89; 18.05)

α = .05

Table 9 compared mean response scores of two clusters of a questionnaire between the extent of teachers' knowledge of practice of school health appraisal services (Cluster A) and knowledge of school health instructions (Cluster B) in Oshimili North Local Government Area of Delta State. The Cluster A has a mean score of 34.96 with a standard deviation of 11.60. The Cluster B has a mean score of 17.99 with a standard deviation of 8.03. The mean difference between Cluster A and Cluster B is 16.97 whereas the standard deviation of the difference scores is 6.47 which indicated the variability in the changes between the two clusters scores across respondents. The t-value of 31.15 (with df = 140) with a p-value of 0.000, which is less than 0.05 common significance level which suggests that the mean difference between Cluster A and Cluster B scores is statistically significant. The confidence interval of [15.89, 18.05] indicates that a 95% confidence that the true mean difference between Cluster A and Cluster B scores lies between 15.89 and 18.05. Since this interval does not contain zero, it reinforces the conclusion that there is a significant difference between the two conditions. Therefore, the paired sample t-test results indicated a statistically significant difference between the extent of teachers' knowledge of practice of school health appraisal services and knowledge of school health instructions in Oshimili North Local Government Area of Delta State.

Hypothesis 2: There will be no significant difference between the extent of teachers' knowledgeof nutritional needs of the pupils and knowledge of good community engagement in school health in Oshimili North Local Government Area of Delta State

Table 10: Summary of Paired Sample t-test Comparing Extent of Teachers' Knowledge of Nutritional Needs of the Pupils and Knowledge of Practice of Good Community Engagement in School HealthinOshimili North Local Government Area of Delta State

Measure	N	*M*	*SD*	*T*	*df*	*p*	95% *CID*
Teachers' knowledge of nutritional needs of the pupils (Cluster C)		16.7447	6.08793	37.195	140	0.000	
Teachers' knowledge of practice of good community engagement in school health (Cluster D)	141	11.0355	4.53307				
Difference (Cluster C - D)		5.70922	1.82263				(5.41; 6.01)

α = .05

Table 10 compared mean response scores of two clusters of a questionnaire between extent of teachers' knowledge of nutritional needs of the pupils (Cluster C) and knowledge of practice of good community engagement in school health (Cluster D) in Oshimili North Local Government Area of Delta State. The Cluster C has a mean score of 16.74 with a standard deviation of 6.09. The Cluster D has a mean score of 11.04 with a standard deviation of 4.53. The mean difference between Cluster C and Cluster D is 5.71 whereas the standard deviation of the difference scores is 1.82 which indicated the variability in the changes between the two clusters scores across respondents. The t-value of 37.20 (with df = 140) with a p-value of 0.000, which is less than 0.05 common significance level which suggests that the mean difference between Cluster C and Cluster D scores is statistically significant. The confidence interval of [5.41, 6.01] indicates that a 95% confidence that the true mean difference between Cluster C and Cluster D scores lies between 5.41 and 6.01. Since the interval does not contain zero, it reinforces the conclusion that there is a significant difference between the two response ratings. Therefore, the paired sample t-test results indicated a statistically significant difference between the extent of teachers' knowledge of nutritional needs of the pupils and knowledge of practice of good community engagement in school health in Oshimili North Local Government Area of Delta State.

Hypothesis 3: There will be no significance difference between teacher's knowledge of skill-based of teaching and knowledge of school health instructions in Oshimili North Local Government Area of Delta State.

Table 11: Summary of Paired Sample t-test Comparing Extent of Teachers' Knowledge of Skill-Based of Teachingand Knowledge of School Health Instructions in Oshimili North Local Government Area of Delta State

Measure	N	*M*	*SD*	*t*	*df*	*P*	95% *CID*
Teachers' knowledge of practice of skill-based of teaching (Cluster E)		26.9149	10.00106				
Teachers' knowledge of school health instructions (Cluster A)	141	34.9645	11.60259	36.042	140	0.000	(7.61; 8.49)
Difference (Cluster E - A)		-8.04965	2.65202				

α = .05

Table 11 compared mean response scores of two clusters of a questionnaire between extent of teachers' knowledge of practice of skill-based of teaching (Cluster E) and knowledge of school health instructions (Cluster A) in Oshimili North Local Government Area of Delta State. The Cluster E has a mean score of 26.91 with a standard deviation of 10.00. The Cluster A has a mean score of 34.96 with a standard deviation of 11.60. The mean difference between Cluster E and Cluster A is -8.05 whereas the standard deviation of the difference scores is 2.65 which indicated the variability in the changes between the two clusters scores across respondents. The t-value of 36.04 (with df = 140) with a p-value of 0.000, which is less than 0.05 common significance level which suggests that the mean difference between Cluster E and Cluster A scores is statistically significant. The confidence interval of [7.61, 8.49] indicates that a 95% confidence that the true mean difference between Cluster E and Cluster A scores lies between 7.61 and 8.49. Since the interval does not contain zero, it reinforces the conclusion that there is a significant difference between the two response ratings. Therefore, the paired sample t-test results indicated a statistically significant difference between the extent of teachers' knowledge of practice of skill-based of teaching and knowledge of school health instructions in Oshimili North Local Government Area of Delta State.

Summary of Findings

The findings of the study were summarized as follows;

1. Primary school teachers perceive themselves as having a high extent of knowledge about health appraisal services in Oshimili North Local Government Area of Delta State.
2. Primary school teachers' knowledge of school health instructions in Oshimili North Local Government Area of Delta State is generally low.
3. Primary school teachers have a low extent of knowledge regarding pupils' nutritional needs in Oshimili North Local Government Area of Delta State.
4. Primary school teachers have a low extent of knowledge on fostering community relation to support school health in Oshimili North Local Government Area of Delta State

5. Primary school teachers havea high extent of knowledge in skills-based teaching methods in Oshimili North Local Government Area of Delta State
6. There is a statistically significant difference between the extent of teachers' knowledge of practice of school health appraisal services and knowledge of school health instructions in Oshimili North Local Government Area of Delta State.
7. There is a significant difference between the extent of teachers' knowledge of nutritional needs of the pupils and knowledge of practice of good community engagement in school health in Oshimili North Local Government Area of Delta State.
8. There is a significant difference between the extent of teachers' knowledge of skill-based of teaching and knowledge of school health instructions in Oshimili North Local Government Area of Delta State.

Discussion of Findings

The study revealed that teachers generally perceive themselves as competent in school health services, particularly in conducting health screenings, maintaining health records, and referring students with health concerns to medical professionals. This aligns with research by Basch (2020), which highlights the importance of teacher involvement in identifying health-related barriers to learning. The high mean scores in areas such as knowledge of health appraisal components (M = 3.20, SD = 0.97) and understanding the purpose of health screenings (M = 2.89, SD = 1.10) indicate a reasonable level of confidence among teachers in these domains. Similarly, Sorensen, Williams, and Carter (2021) emphasized that teachers play a key role in early identification of health issues due to their constant interaction with students.

Moreover, the study found consistency in teachers' ability to refer students for health concerns, as reflected in the mean score for health referrals (M = 3.03, SD = 0.96). This supports the findings of Yoder and Ruwe (2022), who noted that with basic training, teachers can effectively recognize and refer students needing medical attention

Overall, the low mean score for teachers' knowledge of school health instruction (M = 2.00, SD = 0.94) suggests a general lack of preparedness. This aligns with Akinsola (2018), who emphasized the need for systemic reforms in teacher education to enhance their ability to deliver health instruction.

The study also revealed a concerning gap in teachers' knowledge of pupils' nutritional needs, particularly in Oshimili North Local Government Area of Delta State. The grand mean of 2.39 (SD = 0.94) falls below the benchmark of 2.50, suggesting a generally low level of understanding. This aligns with previous studies (Akinbode, Adeyemi, &Oladipo, 2016; Omotayo&Adediran, 2020), which highlighted insufficient nutritional knowledge among educators in some regions. Given the importance of proper nutrition in child development, empowering teachers with robust knowledge in this area is essential.

Interestingly, teachers scored relatively higher on items related to awareness of strategies for engaging parents and community members in promoting students' health, as well as knowledge of collaborating with community health organizations. While these scores exceeded the benchmark of 2.50, high standard deviations suggest considerable variability among respondents. This aligns with findings by Okonkwo and Chukwuma (2021), who noted disparities in teachers' ability to apply community engagement strategies effectively. The study suggests that inadequate training and limited opportunities for professional development may be contributing factors to these inconsistencies (UNESCO, 2022).

The study also examined teachers' knowledge and confidence in skills-based teaching methods. The overall mean score of 2.69 (SD = 1.05) suggests that, on average, teachers have a moderate understanding of these methods, which emphasize active learning through hands-on activities, role-playing, and real-life scenarios. Notably, items related to knowledge of skills-based teaching (M = 3.15, SD = 0.90) and interactive methods (M = 3.03, SD = 1.01) received positive ratings, aligning with research on the growing recognition of student-centered teaching approaches (WHO, 2020).

However, teachers faced challenges in consistently applying these methods. For instance, the moderate ratings for using hands-on activities (M = 2.56, SD = 1.26) and interactive methods (M = 3.03, SD = 1.01) suggest familiarity but limited implementation. Lower ratings for role-playing (M = 1.97, SD = 0.85) and incorporating real-life scenarios (M = 2.31, SD = 1.14) indicate that these crucial elements of skills-based teaching are underutilized. This is concerning, as research by Bennett (2006) highlights that role-playing and real-life applications help students internalize health concepts more effectively.

Conclusion

The study found that while teachers in Oshimili North Local Government Area perceive themselves as competent in school health services, significant gaps exist in their knowledge of school health instruction, pupils' nutritional needs, and the application of skills-based teaching methods. While they demonstrate a moderate understanding of some key areas, the findings suggest that variability in training and experience affects their overall preparedness. Addressing these gaps through targeted training, professional development, and systemic educational reforms is necessary to enhance teachers' effectiveness in promoting student health and well-being.

Recommendations

Based on the findings of the study, the researchers make the following recommendations:

1. Government should organize workshops and seminars to deepen teachers' understanding of health appraisal services and provide regular updates on health policies, guidelines, and tools to keep teachers informed.
2. Government should also develop and implement training programs focused on school health instruction for teachers and include school health education as a core component in teacher professional development programs.

3. Government should as well incorporate nutrition education into the school curriculum and align it with practical activities, such as school gardening and distribute user-friendly guides on balanced diets and the importance of nutrition for growth and learning.
4. School health personnel in collaboration with school management should encourage schools to form health committees that include teachers, parents, and community leaders and facilitate regular community meetings and sensitization programs to highlight the importance of community involvement in school health.
5. Government should also continue to provide advanced training for teachers in skills-based teaching approaches, monitor and evaluate the implementation of skills-based methods to ensure their effectiveness in promoting health education.

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