www.ijarp.com ISSN 2456-9992 Page: 01-11

Research Article

International Journal Advanced Research Publications

Volume: 02
Issue: 10

SCHOOL HEALTH SERVICES, MANPOWER AND HEALTH APPRAISAL AS CORRELATES OF HEALTH PROMOTION IN PRIMARY SCHOOLS IN DELTA STATE, NIGERIA

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Article Received: 05 September 2026, Article Revised: 25 September 2026, Published on: 15 October 2026

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Doi: https://doi-doi.org/101555/ijarp.1269

ABSTRACT

This study examined the school health services, manpower and health appraisal as correlates of health promotion in primary schools in Delta State, Nigeria. Three research questions and three hypotheses guided the study. The study employed a correlational research design. The study targeted 10,676 teachers in primary schools in Delta State. The sample size for the study is 370 primary school teachers. The sampling techniques that were used to select the teachers are proportionate stratified and simple random sampling techniques. The main data collection tool for the study will be a questionnaire. Both face and content validity of the instrument were estimated. The reliability index of the instrument was estimated using Cronbach Alpha reliability coefficient. Descriptive statistics of mean and standard deviation were used to answer the research questions. Pearson's product-moment correlation coefficient was used to test the null hypotheses. The significance level for hypothesis testing was set at 0.05. The findings of the study revealed that school health services, available manpower and health appraisal significantly correlates with health promotion in primary schools in Delta State. The finding concluded that the presence, adequacy and effective implementation of these health variables play a critical role in fostering pupils' well-being, preventive health behaviours and engagement in health-promoting activities. The study recommended amongst others that schools should strengthen and institutionalize comprehensive health service programmes by ensuring regular health appraisal, first aid provision and structured referral systems, to support ongoing health promotion activities among pupils.

KEYWORDS: School Health Services; Manpower; Health Appraisal; Health Promotion.

INTRODUCTION

School health promotion is an important component of primary education because the health status of pupils influences their ability to attend school regularly, participate actively in learning and achieve desirable educational outcomes. Schools provide an important setting for promoting health because they reach children during a critical stage of physical, psychological and social development. Health promotion in schools extends beyond the treatment of illness to include preventive, promotive and supportive measures that enable pupils to develop healthy behaviours and enjoy a safe and supportive learning environment. The World Health Organization (WHO, 2022) describes health promotion as a process that enables individuals and communities to increase control over and improve their health. In the school setting, this involves coordinated activities and services directed towards protecting pupils from health risks, identifying health problems early and creating conditions that support healthy development.

One of the important components through which health promotion can be achieved in schools is the provision of school health services. School health services comprise organized health-related activities and interventions provided within or through the school system to protect and promote the health of pupils. Such services may include health screening, referral, treatment of minor ailments, health counselling, emergency care and other activities designed to identify and address health conditions that may interfere with learning. Effective school health services can contribute to early identification of health problems and facilitate timely intervention, thereby reducing the extent to which preventable health conditions affect pupils' school participation and educational experiences. The effectiveness of these services, however, depends substantially on the availability of appropriate personnel to plan, coordinate and deliver them.

Manpower constitutes another critical component of school health promotion. School health manpower includes teachers with health-related responsibilities, school health personnel, nurses, doctors and other appropriately trained individuals who contribute to the implementation of health programmes within the school. The availability of competent personnel is important because school health programmes require individuals who can identify health needs, provide appropriate health information, undertake basic health assessments, respond to health emergencies and facilitate referrals where necessary. Ugwoke and Agbo (2021) noted the importance of qualified personnel in the implementation of effective school health programmes. Where adequate manpower is unavailable, even the provision of health facilities and policies may not translate into effective health promotion

because there may be insufficient personnel to coordinate and sustain the activities required.

Closely related to school health manpower is health appraisal, which provides a systematic means of assessing the health status and health needs of pupils. Health appraisal involves activities designed to identify physical, developmental, emotional and other health conditions that may affect pupils' well-being and learning. Through regular health appraisal, health problems can be detected at an early stage and appropriate intervention, referral or follow-up can be initiated. The importance of health appraisal is particularly evident in primary schools, where children may be unable to recognize or communicate health problems adequately on their own. Consequently, systematic assessment by trained personnel can provide an important basis for identifying conditions that might otherwise remain undetected and interfere with school attendance, participation and academic development.

The relationship between school health services, manpower and health appraisal is therefore important to the achievement of health promotion in primary schools. School health services provide the institutional framework through which health needs can be addressed, while adequate manpower provides the human resources required to implement and sustain such services. Health appraisal, in turn, provides information about the health conditions and needs of pupils and can guide appropriate preventive, corrective and referral measures. These components are interconnected, such that weaknesses in one component may limit the effectiveness of the others. Adequate health personnel may improve the delivery of school health services, while effective health appraisal may facilitate early identification and management of health problems. Thus, the availability of these school health variables may have implications for the extent to which primary schools are able to promote the health and well-being of their pupils.

Despite the recognized importance of school-based health promotion, concerns remain about the adequacy and distribution of health-related resources and services in Nigerian schools. Evidence from Delta State has indicated continuing infrastructural and resource challenges within the school system. Government interventions have included the renovation of school facilities and provision of infrastructure; however, reported assessments have also identified continuing needs and uneven distribution of resources across schools (Delta State Ministry of Education, 2023; Independent Newspaper, 2023). Such conditions raise questions not only about the physical environment of schools but also about the availability of personnel and organized health services capable of responding to pupils' health needs.

The concern becomes more important in primary schools because pupils are particularly dependent on adults and institutions for the identification and management of many health-

related needs. Inadequate manpower may limit the capacity of schools to provide appropriate health services, while insufficient health appraisal may result in health conditions remaining unidentified until they become more serious. Similarly, where school health services are inadequately provided, opportunities for prevention, early intervention and referral may be missed. These challenges may ultimately undermine the capacity of schools to provide a comprehensive health-promoting environment for pupils.

Although previous studies have examined aspects of school health and the provision of health-related facilities, there is a need for empirical evidence on how specific school health components relate to health promotion in primary schools in Delta State. In particular, the extent to which school health services, available manpower and health appraisal are associated with health promotion requires empirical investigation. Establishing these relationships can provide evidence for understanding the contribution of service provision, human resources and systematic health assessment to school health promotion. It is against this background that this study examines school health services, manpower and health appraisal as correlates of health promotion in primary schools in Delta State, Nigeria.

1.4 Research Questions

The following research questions were raised to guide the study:

1. To what extent does the availability of school health services correlates with health promotion in primary schools in Delta State?
2. To what extent does manpower correlates with health promotion in primary schools in Delta State?
3. To what extent does health appraisal correlates with health promotion in primary schools in Delta State?

1.5 Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

1. School health services do not significantly correlates with health promotion in primary schools in Delta State.
2. Available manpower does not significantly correlates with health promotion in primary schools in Delta State.
3. Health appraisal does not significantly correlates with health promotion in primary schools in Delta State.

METHODS

The study employed a correlational research study of the ex-post facto design. The study targeted teachers in primary schools in Delta State. Statistics from the Delta State Ministry of Basic and Secondary Education revealed that there are currently 1,113 primary schools with 10,676 teachers. The sample size for the study is 370 primary school teachers. This sample size was considered adequate for the study because of the recommendation of Gill, et al. (2010) who, in their study on sample size determination, suggested that in a study where the population size is between 10,000 and 24,999; that a sample size of 370 is adequate at 95% confidence level. The researcher selected teachers from schools across the 25 Local Government Areas of Delta State. The sampling techniques that were used to select the teachers are proportionate stratified and simple random sampling techniques. The researcher determined the percentage of the sample size relative to the total population, which stood at 3.47%. Hence, 3.47% of the total population of teachers in each local government area were selected. The reasons for this choice of sampling technique were to obtain a proportionate representative sample of teachers in each local government area of Delta State. Thus, Local Government Areas with larger number of health teachers (educators) had a greater number of teachers in the overall sample-size than those with a smaller number of Health Teachers to justify the proportionate sampling technique.

The main data collection tool for the study was a questionnaire. The questionnaire consists of two sections, namely, Sections A and B. Section A contains the demographic data of the respondents while sections B consists of four sub-units, each with item statements to which respondents responded under strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD), each quantified as 4, 3, 2 and 1 respectively using the Likert like scale. Both face and content validity of the instrument were estimated. To ensure the face and content validity of the instrument, expert opinions were sought from experts in Health and Safety Education as well as Test and Measurement in Delta State University Abraka. The instrument was reviewed for content and clarity and suggestions from the experts were incorporated before proceeding with reliability testing. To determine the reliability of the instrument, a pilot test was conducted with a sample of 50 teachers in Edo state, which is outside the study area. The internal consistency of the instrument was measured using Cronbach's alpha reliability coefficient. It yielded the following coefficients: 0.93 for School Health Services; 0.965 for Manpower Situation in Schools; 0.93 for Health Appraisal; and 0.84 for Health Promotion Rating Scale. The overall scale had a coefficient of 0.98. This means items in the scale are reliable and can be used for the study.

Before distributing the data instrument, permission was obtained from the head teachers of the schools and informed consent was sought from the respondents. The researchers, with the help of six briefed research assistants, personally administered the questionnaire. The researchers assured the respondents of the anonymity and confidentiality of their responses, with clear instructions provided to encourage accurate responses. Completed copies of the questionnaire were retrieved immediately, to avoid "questionnaire-contamination" that is, some respondents cancelling and altering the responses, after consultation with other respondents. The data collected were analysed using the Statistical Package for Social Sciences (SPSS). Pearson's correlation and coefficient of determination was used to answer the research questions. In order to determine the strength of the relationship as raised in the research questions, the benchmark suggested by Cohen was adopted. Cohen (1988) suggested the following guidelines for the interpretation of the strength of relationship:

r = .10 to .29 - Small Positive Relationship

r = –.10 to – .29 - Small Negative Relationship

r = .30 to .49 - Moderate Positive Relationship

r = –.30 to – .49 - Moderate Negative Relationship

r = .50 to 1.0 - Large Positive Relationship

r = – .50 to – 1.0 - Large Negative Relationship

Pearson's product-moment correlation coefficient was used to test the null hypotheses. The significance level for hypothesis testing was set at 0.05.

RESULTS

Research Question 1: To what extent does the availability of school health services correlates with health promotion in primary schools in Delta State?

Table 1: Pearson's product Moment Correlation Coefficient and coefficient of determination on availability of school health services with health promotion in primary schools.

Variable	N	r	r^2	r^2%	Decision
Availability School Health Services Health promotion	370	0.154	0.024	2.4	Low Positive Correlation

Table 1 Shows that the r – value of 0.154 was the extent of the availability of school health services correlates with health promotion in primary schools. The coefficient of determination was 0.024 and the amount of contribution of availability of school health services to health promotion in primary schools was 2.4%. The result indicates a low positive correlation

between availability of school health services and health promotion in primary schools in Delta state.

Research Question 2: To what extent does manpower correlates with health promotion in primary schools in Delta State?

Table 2: Pearson's product Moment Correlation Coefficient and coefficient of determination on available man power with health promotion in primary schools.

Variable	N	r	r^2	r^2%	Decision
Available Manpower Health Promotion	370	0.158	0.025	2.5	Low Positive Correlation

Table 2 indicates the r – value of 0.158 as the extent of correlation between manpower with health promotion of primary schools. The coefficient of determination was 0.025 and the amount of contribution of available manpower to health promotion of primary schools was 2.5%. This revealed a low positive correlation between available manpower and health promotion in primary schools in Delta state.

Research Question 3: To what extent does health appraisal correlates with health promotion in primary schools in Delta State?

Table 3: Pearson's product Moment Correlation Coefficient and coefficient of determination on health appraisal with health promotion in primary schools.

Variable	N	r	r^2	r^2%	Decision
Health Appraisal Health Promotion	370	0.255	0.065	6.5	Low Positive Correlation

The result in this table 3 Shows the r – value of 0.255 as the extent of the correlation between health appraisal with health promotion in primary schools. The coefficient of determination was 0.065 and the amount of contribution was 6.5%. This revealed a low positive correlation.

Hypothesis 1: School health services do not significantly correlates with health promotion in primary schools in Delta State.

Table 4: Correlation analysis of the extent to which school health services significantly correlates with health promotion in primary schools in Delta State.

Variable	*N*	*r*	p-value	Remark
School Health Services				
Health Promotion	370	0.154	0.003	Significant

Table 4 shows the r-value of 0.154 and a p-value of 0.03. Testing the null hypothesis at an alpha level of 0.05, the p-value of 0.003 was less than the alpha level of 0.05. Hence, the null hypothesis is rejected. This implies that school health services significantly correlate with the health promotion in primary schools in Delta state.

Hypothesis 2: Available manpower do not significantly correlates with health promotion in primary schools in Delta State.

Table 5: Correlation analysis of the extent to which available manpower significantly correlates with health promotion in primary schools in Delta State.

Variable	*N*	*r*	p-value	Remark
Available Manpower				
Health Promotion	370	0.158	0.002	Significant

Table 5 revealed the r-value of 0.158 and a p-value of 0.002. Testing the null hypothesis at an alpha level of 0.05, the p-value of 0.002 is less than the alpha level of 0.05. Thus, the null hypothesis is rejected. This indicates that the available manpower significantly correlate with the health promotion in primary schools in Delta state.

Hypothesis 3: Health appraisal do not significantly correlates with health promotion in primary schools in Delta State.

Table 6: Correlation analysis of the extent to which health appraisal significantly correlates with health promotion in primary schools in Delta State.

Variable	*N*	*r*	p-value	Remark
Health Appraisal				
Health Promotion	370	0.255	<0.001	Significant

Table 6 indicates the r-value of 0. and a p-value of 0.001. Testing the null hypothesis at an alpha level of 0.05, the p-value of 0.001 is less than the alpha level of 0.05. Therefore, the null hypothesis which states that “Health appraisal do not significantly correlate with the health promotion in primary schools in Delta state is rejected.

DISCUSSIONS

The first finding revealed that school health services significantly correlates with health promotion in primary schools in Delta State. This finding suggests that there is a meaningful relationship between the presence and utilization of structured health services in schools and the extent to which health-promoting activities are implemented and experienced by pupils.

The significant correlation indicates that schools with more readily available and effectively delivered health services tend to demonstrate stronger health promotion outcomes. This implies that the integration of health services within the educational setting not only addresses immediate health needs but also fosters a culture of health awareness, preventive practices and supportive health behaviours among primary school pupils. This finding aligns with Adeyemo and Onifade (2022), who reported that schools with robust health services are more likely to implement effective health education, screening programmes and referral procedures, which in turn contribute to improved health outcomes among pupils. The finding also agrees with Okeke et al. (2023), who found that the presence of proactive school health services significantly predicted higher levels of health knowledge and preventive health behaviours among primary school children.

The second finding showed that available manpower significantly correlates with health promotion in primary schools in Delta State. This finding suggests that the presence and adequacy of manpower are positively associated with the extent of health-promoting activities within schools. This relationship implies that schools with a more substantial and capable workforce are better positioned to implement structured health promotion initiatives, ranging from routine health appraisals and first-aid delivery to sustained health education and referral systems. In primary schools where manpower is scarce, health promotion efforts tend to be weaker or more fragmented, as the burden of health-related responsibilities may fall on untrained staff or be deprioritised amid competing academic demands. On the other hand, when manpower is available and effectively allocated to school health functions, schools are better able to engage pupils in preventive practices, respond promptly to health needs and maintain regular health monitoring. This finding is consistent with Kuponiyi et al. (2016), who found that increased manpower could improve the scope and quality of health promotion activities. The finding also agrees with the World Health Organization (WHO, 2023), which emphasise that adequate human resources are essential for delivering and sustaining health promotion interventions in schools, as personnel with appropriate skills and roles help to integrate health practices into the school routine and reinforce healthy behaviours among pupils.

The third finding revealed that health appraisal significantly correlates with health promotion in primary schools in Delta State. This finding suggests that health appraisal is a key determinant of effective health promotion within the school environment. Health appraisal activities enable schools to identify health needs promptly and tailor interventions that support learners' well-being. This implies that schools that routinely conduct health

appraisals tend to demonstrate stronger health promotion practices, as these appraisals provide critical data that inform health education, preventive measures, referral decisions and resource allocation. In essence, health appraisal serves as a diagnostic foundation for health promotion, enabling stakeholders to move beyond reactive responses to health issues toward structured, evidence-based strategies that enhance pupils' health outcomes. This finding aligns with Adegoke and Bello (2022), who found that routine health screenings in primary schools significantly improved early identification of vision and dental problems, leading to targeted health education and reduced absenteeism, thereby enhancing overall health promotion. The finding also agrees with Olatunde et al. (2023), who reported that schools with structured health appraisal systems were better able to design and implement appropriate health interventions, which in turn fostered healthier lifestyle practices among pupils.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, it was concluded that school health services, available manpower and health appraisal are important correlates of health promotion in primary schools in Delta State. The findings indicate that the availability and effective provision of organized school health services can contribute to the promotion and protection of pupils' health, while adequate and competent manpower is essential for the effective implementation and sustainability of school health programmes. Similarly, regular health appraisal provides an important mechanism for identifying pupils' health needs and facilitating appropriate intervention, referral and follow-up. Collectively, these components provide a framework for addressing pupils' health needs and creating conditions that support their well-being and participation in school activities. Therefore, strengthening school health services, ensuring adequate health-related manpower and institutionalizing regular health appraisal can contribute to more effective health promotion in primary schools in Delta State.

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

i Schools should strengthen and institutionalize comprehensive health service programmes by ensuring regular health appraisal, first aid provision and structured referral systems, to support ongoing health promotion activities among pupils.

ii Government and school authorities should increase and appropriately train health personnel and health educators responsible for school health, ensuring adequate staffing to implement and sustain health promotion initiatives effectively.

iii Schools should conduct routine and systematic health appraisals for all pupils, using standardized screening tools to detect health issues early and inform targeted health promotion interventions.

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