

# EVALUATING THE IMPACT OF HEALTH EDUCATION ON HEALTH KNOWLEDGE: A STUDY OF SECONDARY SCHOOL STUDENTS IN CROSS RIVER STATE, NIGERIA

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## ABSTRACT

Education is an accumulated experience that helps to shape human character and mind. Health education in schools is a necessity designed to develop optimum physical, mental, emotional, spiritual, and social health among students. Unfortunately, recent studies show that secondary school students are nowadays reckless and less conscious on issues concerning their health. Students' unrestricted freedom and exposure to modern technologies such as television, computer games, video games, mobile phones, internet, access to fast foods rich in saturated fats, and driving them to school as opposed to walking or cycling is also not helping matters. The resultant effects are increased number of teenage pregnancies, obesity, HIV/ AIDS, communicable diseases and other sexually transmitted diseases (STDs). The study adopted the Survey Research design with structured questionnaire as an instrument for data collection. A total of 500 students participated in the study and data were analyzed using the Pearson Product Moment Correlation Coefficient ( $r$ ). Findings revealed that there is significant relationship between health knowledge and health education amongst senior secondary school students in Cross River State. This implies that the introduction and implementation of health education programs in secondary schools have contributed immensely to the students' increased knowledge about health related issues, which is a vehicle for proper healthy living needed for societal development.

**KEYWORDS:** Health, Health Education, Health Knowledge, Students, Cross River State.

## INTRODUCTION

Education can be seen as an accumulated experience that helps to shape human character and mind. It is also the process through which

societal values, norms, principles, ethos, skills and mores can adequately be conveyed.

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It is an established fact that members of a given society seek education to acquire useful knowledge that can better their lots [22]. It has been observed that education is an important social determinant of health. Research has it that a greater level of education can help advance public health, create wealthier economies as well as generate more cohesive, safer and healthier societies. The knowledge and social skills provided through education can better equip individuals to access and use relevant health information and arrive at healthy decision making needed to maintain and improve personal and family health [13].

Health consciousness is a possible determinant of a healthy lifestyle. A healthy lifestyle is prerequisite for academic success. Students must be healthy in order to function effectively in school [7]. School health programs are said to be one of the most efficient strategies that many developing nations used to prevent major health disasters and social problems. Schools are considered one of the major institutions for providing the required instruction and experiences that can help prepare young people to learn better ways to effectively manage their health as well as become healthy and productive future adults [26].

Health education at this level is a set of consciously constructed opportunities for learning, designed to facilitate changes in behavior towards a predetermined goal, and involving some form of communication designed to improve health literacy, knowledge, and life skills that are conducive to individual and community health (PAHO 1996; WHO 1998).

As pointed out by Donatelle [11], some of the key areas covered by health education include environmental health, physical health, social health, emotional health, intellectual health, and spiritual health. School health education builds students' knowledge, skills, and positive attitudes about health and motivates them to improve and

maintain their health, prevent disease, and reduce risky behaviors. It also helps the students in acquiring needed skills to enable them to make healthy choices and arrive at good practices that in turn contribute to societal growth and development. This may have informed the conclusion of the New Hampshire Department of Education (2012) that effective health education can bring about positive changes in behavior that lower student risks around alcohol, tobacco, and other drugs, injury prevention, mental and emotional health, nutrition, physical activity, prevention of diseases and sexuality and family life.

A study by Kubayi and Surujlal [16] lamented that adolescents are fast becoming more obese and more sedentary because of their lack of adequate health knowledge and participation in physical exercises. In a state like Cross River which is predominantly made up of vulnerable rural dwellers often exposed to health challenges due to lack of proper health education, untidy environments, unwholesome cultural practices, untreated drinking water and superstitious beliefs amongst others, pose a serious health education challenge.

More worrisome is the increasing rate of malaria, polio, HIV-AIDS, and other communicable diseases like dysentery, measles, diarrhea, and typhoid fever due to lack of adequate health information and awareness [20]. In view of the above, this study will critically evaluate the impact of health education on health knowledge of secondary schools in Cross River State.

## **THEORETICAL FRAMEWORK**

The foundation of this research was based on the Social Learning Theory (SLT) by Albert Bandura [4]. According to Bandura, people learn from one another via observation, imitation, and modeling. Social Learning Theory assumes that people and their environments interact continuously [17 (p. 1)]. It is important to recognize that SLT clearly

addresses both the psychosocial factors that determine health behavior and strategies to promote behavior change. According to Bandura [4] most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action.

Bandura [4] insisted that children observe people around them behaving in various ways, pay attention to these people and encode their behavior which at a later time they may imitate. This means that health educators are taken seriously as the students learn by observing and imitate at home the health habits acquired from their teachers.

Bandura concluded with the following points: Attention to task affects learning, information learnt must be retained, a child must be able to reproduce or imitate the behaviors learnt, motivation either from past, promised, or vicarious reinforcement drives imitation, and punishment never works as effectively as reinforcement.

## **STATEMENT OF THE PROBLEM**

Secondary schools play a key role in imparting important information on health and human relations. The school setting provides an important venue to transmit information and skills that can protect youth against risky behaviors [24]. It is observed that secondary school students are usually vulnerable to unplanned pregnancy, HIV/ AIDS, sexually transmitted diseases (STDs), obesity and other health related challenges due to lack of proper health education.

These challenges are often attributed to low parental supervision witnessed in our society. Hence, students often engage in sporadic and unprotected sexual intercourse which is

obviously inimical to their academic life. This has resulted in several cases of unsafe condition of abortions estimated at 760,000 leading to 20,000 death cases [3].

Currently, health consciousness among secondary school students has witnessed a serious decline. Students are reckless with health issues. They pay little or no attention to health education. As observed in Ogbiji and Ekpo [21], most students are unaware of the obvious benefits of health education which is geared towards developing optimum physical, mental, emotional and social health among all pupils. A report by Kubayi and Surujlal [16] attributed the increased obesity among children to the increasing trend of physical inactivity due to their exposure to modern technological devices such as television, computer games, video games, mobile phones, internet, access to fast foods rich in saturated fats, and the fact that children are often driven to school nowadays as opposed to walking or cycling.

## **PURPOSE OF THE STUDY**

The main purpose of this study was to evaluate the impact of health education on health knowledge of secondary school students in Cross River State, Nigeria, specifically, to measure the relationship between health knowledge and health education of secondary school students in Cross River State.

## **RESEARCH QUESTIONS**

- To what extent does health knowledge relate to health education among senior secondary school students in Cross River State?

## **RESEARCH HYPOTHESES**

- There is no significant relationship between health knowledge and health education among senior secondary school students in Cross River State.

## **SCOPE AND DELIMITATIONS**

The scope of this study covered the entire Cross River State. However, due to financial and logistical factor, the scope was delimited to 14 public secondary schools selected from the 3 educational zones in Cross River State (6 from Calabar zone, 4 from Ikom zone and 4 from Ogoja zone). It was also delimited to the evaluation of the impact of health education and health knowledge of secondary school students in Cross River State.

## **METHODOLOGY**

Research design as described by Denga and Ali (2001) is a planned structure and strategy of investigation, concerned about obtaining answers to the research questions already stated and control variance. The study adopted the survey design. According to Ali [2], survey design is a type of design which is suitable mainly for finding, describing and interpreting data collected from sample of a very large population through a representative method in order to find out and describe existing phenomena in the population. Data for this research were obtained from two principal sources: primary and secondary. The primary source of data collection was with the use of questionnaire, while the secondary sources of data were library research, consultation of textbooks, journals, web page publication etc.

## **POPULATION OF THE STUDY**

The population of this study consisted of the entire senior students of public secondary schools in Cross River State, Nigeria. Information available at the State Ministry of Education showed that there were a total of two hundred and thirty two (232) public schools in 2014/ 2015 and a total of nine thousand, five hundred and thirty three (9,533) students spread round the three (3) educational zones, in senior secondary school in the entire state.

A multi-stage sampling procedure (consisting of stratified, purposive and simple random sampling techniques) was adopted in selecting the number of schools as well as 500 respondents who participated in this study. Data generated for the study was analyzed using mean and standard deviations as well as the Pearson Product Moment Correlation Coefficient.

## **DEFINITION OF TERMS**

Technical terms used in this study are defined below in their operational sense:

**Health:** State of wellness of students.

**Health Education:** This refers to the health education activities carried out in a school setting for promoting and maintaining health of students.

**Health Consciousness:** The state of being alert and aware about health outcomes.

**Health Knowledge:** The realization of health information, particularly those passed in schools.

## **LITERATURE REVIEW**

### **THE CONCEPT OF HEALTH**

Before discussing extensively about the field of health education, it is pertinent to conceptualize what health itself means. The concept of health is so familiar that many of us have never thought much about what it really means. Bury [8] observed that health is something of an enigma. Like the proverbial elephant, it is difficult to define but easy to spot when we see it. Any reflection on the term, however, immediately reveals its complexity.

Health is very essential to the individual, community and the nation at large. Health is considered wealth by so many. Healthy living varies according to individual and community expectations and context. Many people consider themselves healthy if they are free of disease or

disability. They could simply refer to health as “the absence of disease”. However, people who have a disease or disability may also see themselves as being in good health if they are able to manage their condition so that it does not impact greatly on their quality of life [32].

Historically, the ‘health’ as an English word has been traced to have appeared approximately in the year 1000 A.D. From inception, it meant the state and the condition of being sound or whole. More precisely, health was associated not only with the physiological functioning, but with mental and moral soundness, and spiritual salvation, as well. Though the word health has often been preceded by both positive and negative qualifiers such as good, bad or poor, it has always been regarded as a positive entity [6].

The idea of health is also capable of wide and narrow application, and can be negatively as well as positively defined. We can be in good health and poor health. Moreover, health is not just a feature of our daily life, it also appears frequently on the political landscape as such, we must take a dynamic view of health and illness as processes that are shaped by social circumstances and altering perceptions. Health has a moral dimension, reflecting not only the adoption or maintenance of a healthy lifestyle, but also how people respond to illness and deal with its aftermath [8]. A study by Blaxter [5 (p. 14)] on lay beliefs drawn from responses to open-ended questions about health put to 9,000 respondents in England, Wales and Scotland shows that for lay people “health can be defined negatively, as the absence of illness, functionally as the ability to cope with everyday activities, or positively as fitness and well-being”.

Moshé Feldenkrais looking at the complex nature of defining the concept of health defined it as ‘the ability to live your dreams’ [15]. Health, according to World Health Organization (WHO, 1948, p. 100) “is a state of complete physical,

mental and social well-being and not merely the absence of disease or infirmity”.

Abi [1] pointed out that promotion of good health is one key responsibility of government in accordance with public policy. He however observed that in Cross River State the health system is not given adequate attention and as a result suffers setback due to paucity of budgetary allocations, inadequate facilities, corruptions and looting of health funds by government officials etc.

## **THE CONCEPT OF HEALTH EDUCATION**

Health education has been defined by several authors, professionals and scholars, though not with a unified definition. Coalition of National Health Education Organizations [10 (p. 1)] defined health education as a social science that combines “biological, environmental, psychological, physical and medical sciences to promote health and prevent disease, disability and premature death through education-driven voluntary behavior change activities”. It is the development of individual, group, institutional, community and systemic strategies to improve health knowledge, attitudes, skills, and behavior. In a similar definition, University of Wincosin (2016, p.1) see Health Education as an applied field of learning that relies largely upon the knowledge of the physical, biological, and medical sciences, and other related fields. “It is a discipline in which the relevant knowledge and ideas from several fields are combined and synthesized. Because the concept of unity is its primary focus, health education strives toward the application of knowledge in achieving the integrated self”.

The World Health Organization [30 (p. 4)] defined health education as “comprising consciously constructed opportunities for learning involving some form of communication to improve health literacy, including improving knowledge and developing life skills which are conducive to

individual and community health". Donnie, Fyfe and Tannahill [12 (p. 28)] added that it is a "communication activity aimed at enhancing positive health and preventing or diminishing ill-health in individuals and groups through influencing the beliefs, attitude and behavior of those with power and of the community at large".

Health education is concerned with the change in knowledge, feelings and behavior of people. In its most usual 'form it concentrates on developing such health practices as are believed to bring about the best possible state of well-being' (WHO, 1954). The preservation of the child's health is no doubt the duty of the parents. But in most cases the child and his family do not know certain essentials of health.

The idea of bringing health education to the schools as pointed out by Jourdan [14 (p. 23)] was predicated on the belief that all "civilizations pass down prescriptive advice about health as part of collective wisdom... and the idea that positive health behaviors can be acquired in childhood has led the political authorities to assign schools the task of prevention".

Health education is an essential tool for health promotion. It is critical for improving the health of populations and promotes health capital. Yet, it has been observed that not much attention has been given to this important area of study. This limited interest stems from various factors, including: "lack of knowledge of and consensus on the definitions and concepts of health education and promotion; and the difficulty health educators face in demonstrating the efficiency and showing tangible results of the practice of health education" (WHO, 2012, p. 5).

The purpose of health education in school according to Society for Public Health Education [25] is to assist students adopt healthful behaviors thereby improving their academic performance and to positively influence the

health behavior of individuals and communities as well as the living and working conditions that influence their health. Health education also improves the health status of individuals, communities, states, and the nation; enhances the quality of life for all people; and reduces costly premature deaths and disability (WHO, 2012).

## **HEALTH KNOWLEDGE AND HEALTH EDUCATION**

Health education in secondary schools is targeted towards improving health knowledge of the students for better healthy living. Teachers are expected to enhance students' health knowledge and skills needed for raising students' critical consciousness as well as improve their interest in health education and physical exercises because they continue to serve as role models and influential behavioral and attitudinal change agents for adolescents in school settings [23].

A study by Dika (2005) observed that the nature of the environment and condition of learning determines not in a small measure their level of health knowledge and experiences. An enabling environment is said to promote desirable health outcomes. This shows that all aspects of the school environment, whether physical or psychological, have direct bearing on health and well-being of the beneficiaries. This is supported by Ademuwagun et al. (2002) who said that healthful school environment is a phrase that encompasses all the various physical, emotional and social aspects of the school and the measures provided at the school to ensure the health and safety.

Another study by Udoh (1987) listed what makes up a healthful school environment and it includes: water supply, waste disposal, toilet and lavatory facilities, heat and ventilation, acoustics, lighting, safety features in construction, food services, and emotional climate of school, accident prevention, health aspects of

administration policies and similar aspects. All these are meant to maintain and promote health in the school. Therefore, students' behavior, attitude and practice towards these aspects should be a positive one.

Patty (2001) also opined that accurate knowledge does not guarantee correct conduct in any phase of living and that if a person knows the right thing to do, he may do it, while he may do the proper thing only by chance unless he knows the right course to follow. It is therefore desirable for schools to make tangible efforts to ensure that students possess the essential healthy knowledge and health attitude.

It was observed by Dika (2005) that knowledge of the basic components of the school health programs offered through health instruction accounts for the desirable health attitude and practices and also the objectives of the health education program. These form the bases for evaluation of health education outcomes in schools. Students' understanding and attitudes towards the entire health activities of the school can be objectively evaluated. The contribution of knowledge to students' attitude towards health is clearly explained by authorities in health and their interrelationship can be explained in terms of health education objectives. School health education provides students with learning opportunities in the area of health promotion;

teach the value of positive health and known means of promoting it as well as developing skills in the choice and use of health products and services (Ademuwagun et al., 2002). They also maintain that all those things mentioned are provided through health instructional aspect of health education program of the schools, and that it is purposely for promoting positive health knowledge, attitude and practice. Students are then expected to shift the content presented to them and be able to come out with desirable health education outcome.

## RESULT AND DISCUSSION

### PRESENTATION OF RESULTS BY HYPOTHESIS

H<sub>0</sub>: There is no significant relationship between health knowledge and health education among senior secondary school students in Cross River State.

To test this hypothesis, Pearson Product Moment Correlation Coefficient (r) statistics was employed. Here, data were extracted from the data bank and summarized into their means (X), standard deviation (SD), sums of products ( $\sum X\sum Y$ ), sums of squares ( $\sum X^2 \sum Y^2$ ), and sums of products ( $\sum XY$ ). The result of the analysis has been presented in Table 1 below:

**Table 1. Pearson Product Moment Correlation Coefficient (r) Analysis of the Relationship between Health Knowledge of Students and Health Education in School (N=500)**

Variable	$\sum X_1, \sum Y$	$\sum X^2, \sum Y^2$	$\sum X_1 Y$	Df	r-val	p-val
Health Knowledge (X <sub>1</sub> )	7546	7,83,602				
Health Education (Y)	9,309	877125	7034	498	0.898*	0

\*Result significant at p\* 0.05, df = 498, crit – r = 0.196, p = 0.000

From Table 1 above, the calculated r-value of 0.898\* was found to be greater than the critical r-value of 0.196 needed for significance at 0.05 alpha level with 498 degrees of freedom. With this result, the null hypothesis was rejected. This means that there is significant relationship between health knowledge of students and

health education among senior secondary school students in Cross River State.

### DISCUSSION OF FINDING

The statistical analysis of the hypothesis of this study has revealed the fact that there is a significant relationship between health

knowledge and health education among senior secondary school students in Cross River State. This means that more the health knowledge calculated onto the students by qualified and experienced professional teachers, more will be the health education tendencies exhibited by the students in school.

This finding confirmed WHO's (2003) position that skills-based health education in schools help improve specific health knowledge and attitudes toward self and others, as well as the skills necessary to influence behavior and conditions related to a particular health issue and should enable a young person to apply knowledge and develop attitudes and skills to make positive decisions and take actions to promote and protect one's health and the health of others.

The positive health knowledge shown by secondary school students of Cross River State in this study also confirms the position of a study by Carneiro, Kabulwa, Makyao, Mrosso, and Choum [9] who considered health knowledge to be an essential prerequisite for health-related practices and that there is an association between increased knowledge and better health.

As such, those students who have assimilated the knowledge are more likely to adopt good health practices. U.S. Department of Health and Human Services [27] maintained that health education provides young people with the knowledge and skills they need to become successful learners as well as healthy and productive adults.

A study by Mahmoodabad, Barkhordari, Nabizadeh and Ayatollahi [18] while recounting the achievements of health education, insisted that the lack of physical and health education in students can lead to numerous health complications. The findings of this study revealed that the health knowledge of students in urban secondary schools is better than their counterparts in rural areas of Cross River State, suggesting that the geographical location of

schools affects health knowledge of students. This may be justified by the fact that students from urban secondary schools have generally better facilities and access for learning as compared to their counterparts in rural secondary schools and thus their educational environment required for acquisition for better health knowledge is much more enriched.

## **CONCLUSION**

Based on the findings of this study, it is concluded that there is a significant relationship between health knowledge and health education amongst secondary school students in Cross River State, meaning that the health knowledge of secondary school students acquired through formal teaching of health education in the schools was positive. This implies that the introduction and implementation of health education programs in secondary schools by Cross River State government is a step towards the right direction, as it has contributed immensely to the students' increased knowledge about health related issues, which is a vehicle for proper healthy living needed for societal development.

## **RECOMMENDATIONS**

Based on the findings of this study the following recommendations have been made:

1. There should be an improvement in school health care services in secondary schools by making available adequate health facilities and qualified medical personnel to create an environment for good health practices and appraisal of health habits.
2. Government should employ qualified health education teachers to improve the teaching standard in secondary schools in Cross River State especially at the rural areas.
3. Health education should be extended to cover even the senior secondary schools to improve the health knowledge and practice at the senior level.



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