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THE EFFICACY OF THE SENIOR SECONDARY SCHOOL BIOLOGY CURRICULUM IN CURBING NEGATIVE HEALTH HABITS AMONG YOUTH IN FCT

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The study investigated the Efficacy of the Senior Secondary School Biology Curriculum in Curbing Negative Health Habits Among the Youthsin Federal Capital Territory (FCT), Abuja. The research design was a survey in which three Senior Secondary Schools were randomly selected for the study. A total sample size of one hundred and eighty (180) students constituted the population of the study. The statistical tool used for the data analysis was grand mean. The findings revealed that biology knowledge makes students to discard their negative health habit, cleared some superstitious beliefs, makes students aware that some habit will negatively affect their health in their old age e.t.c. The researcher concludes that the senior secondary school biology curriculum has the efficacy of curbing negative health habits among the youths in FCT. Based on the findings, the following recommendations were made; biology should be taught with human face; using concrete illustrations, explanations and examples, field trips to hospitals, old people's homes, juvenile rehabilitation centres/homes and curriculum components on human nutrition should be given adequate coverage by biology teachers etc.

Keywords: Efficacy, Biology, Curriculum, Curbing, Negative, Health, Habits, Youth.

INTRODUCTION

Over the last ten years, health remains the most talked about issues in the whole world. Out of the Eight Millennium Development Goals (MDGS), four of them dwell extensively on health. The four (4) MDGS that dwell particularly on health include goals;4th reduce child mortality, 5th improve maternal health, 6thcombat HIV/AIDS, malaria and other diseases and 7th ensure environmental sustainability.

These are goals that the 192 United Nations Members States including Nigeria agreed to attain by the year 2015 and beyond in their general meeting of 2002 (Adejoh&Apochi, 2013). In the developing countries with particular reference to Africa (Nigeria inclusive), the strife to attain these four MDGS remains broken. These MDGS is a framework of time bound goals and targets through which progress can be measured, using a base line of 1990. According to the United Nations Progress Report of 2013, to halt and reverse the spread of tuberculosis, showno sufficient progress to reach the target if the prevailing trends persist except by the new target of 2020. There is also very high maternal and high infant mortality in Sub-Saharan, of which Nigeria is included though in combating HIV/AID most of the targets is been met or expected to be met by 2015. Nkwocha and Nwakoby (2000) noted that Nigeria like other countries is laden with various social- health problems such as smoky, alcoholism, drug abuse and addiction, teenage pregnancy etc.

Understanding science particularly biology which dwells on the well-being of man and other living organisms becomes a paramount subject of study. Biology knowledge enables humans understand their body, the environment in which they live and how other lives in the universe function. Biology knowledge explains many mysteries and superstitious beliefs in nature. Pawan (2013) describe science as an enemy of superstition. According to him, the study of science has an educative influence on the mind, and is of far reaching importance; creates realistic attitude to life.

Due to advancement in biology, the world today has a healthier population. According to Adejoh and Apochi (2013), biology occupies a central position in science; it is a life science hence, which deals with living things, their existence and relationships with one another. By the former and the current syllabus of biology, it is offered in senior secondary schools by majority of the students. Ofoegbu (2003) noted that biology is a science subject done in the secondary school by majority of the students. He noted that in most schools it is compulsory for all students in that it is one of the core subjects and in some cases is the only science subject done by most art students. Schools are stakeholders in

equipping the youth with knowledge, attitude and skills. Equipping the youths with knowledge, attitudes and skills through education is providing them a ticket against health challenges. Educating youth on health is been proactive in preventing illness and injury. It also avails them with positive health behaviours in their youthful lifetime and reduces the chances of pre-mature death/casualties. Health education in the early years will produce a generation of knowledgeable citizens who will be able to seek services and advocates policies and environments that affect their health. According to Ofoegbu one of the objective of biology syllabus as derived from national policy to acquire ability to apply scientific knowledge to everyday life in matters of personal and community health and agriculture.

Since 2002, Nigeria among other nations both underdeveloped, developing and undeveloped nations have being striving to achieve health for their citizenry, by the year 2015. Nigeria has taken steps in this direction by putting in place health care programmes (primary health, secondary and tertiary health care) programmes, formation of NAFDAC, NDLEA and other programmes in order to achieve her target of health for all by the year 2015 yet the strife to attain the Millennium Development Goals MDGS on health remains a bleak. A common observation on the street showmany youth suffering from obesity, mental disorder, diabetes, drug addicts and a lot of them are involved in violence such as thuggery, militants and kidnappers and reckless driving occasioned by drug abuse. Also, diseases that were hitherto thought to be diseases of middle age and old age sickness are now very common among the youths and children. Biology as whole is one of the cornerstones of all forms of modern healthcare. Biology helps us in understanding our bodies, environment, treating diseases etc,

The purpose of this study is to investigate the efficacy of the senior secondary school biology curriculum in curbing negative health habits among youth in FCT, Abuja. Specially the study is aimed at the following

STUDY METHODOLOGY

The study was limited to Gwagwalada Area Council of the FCT and following the negative health habits, smoking, alcoholism, sedentary lifestyle, skipping breakfast and junk food consumption.

Population of the Study and Sampling Procedure

The population of the study consisted of all Senior Secondary Biology students in all Senior Secondary Schools in Gwagwalada Area Council.

Purposive sampling technique was use to select three (3) government senior secondary schools in Gwagwalada Area Council. These schools are chosen due to their large population and they are also co-educational. The sampled schools are;

- Government Day Secondary School Gwagwalada
- Government Secondary School Gwagwalada
- Government Secondary School Hajj-Camp Gwagwalada. In each of the schools 60 SS3 students were selected by randomization. This gave a total of One Hundred and Eighty (180) Students.

Instrumentation

The instrument used for generating data for the research is the questionnaire tagged. The questionnaire constructed by the researchers was structured and consist of two parts viz Part A; the bio-data of the respondents and Part B contain items on the efficacy of the biology curriculum to curb negative health habits among the youths.

Structured questionnaire were developed by the researcher on the following negative habits (i) Smoking (ii) Alcoholism (iii) Sedentary lifestyle, (iv) Skippingbreakfast and (v) Junk food consumption. The questionnaires were structured inform of a modified four (4) point Likert Scale of Strongly Agree, Agree, Disagree.

Validity and Reliability

The instrument was validated by biology specialist and a health educator in University of Abuja Teaching Hospital Gwagwalada, Abuja.

Administration of Instrument

The self-developed structured questionnaire was administered to the respondents selected students in the selected senior secondary schools by the researcher and same were retrieved on the spot to ensure hundred percent return of questionnaire.

Method of Data Analysis

Grand mean and standard deviation were use to analyse the result of the data collected for scoring of the Likert scale,

all positive statements will be rated Strongly Agree SA = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1, while the reverse shall be the case for all negative statements. Any mean of 2.50 and above were termed positive response, while any mean below 2.49 were termed negative response. Positive response means that the biology curriculum is able to curb the negative health habits while negative means the biology knowledge cannot address such issues.

Data Presentation and Discussion of Result

Table I: Knowledge of Biology Students and Healthy Living

S/N	Statements	Number	Mass	Standard Deviation	Decision
1.	Biology knowledge is important to health	180	3.8	1.92	Agreed
2.	Studying biology has influence on my health	180	1.18	1.03	Disagreed
3.	Studying biology has no influence on my health	180	1.18	1.03	Disagreed
4.	Biology have helped me understand my body system better	180	4.3	2.10	Agreed
5.	Biology knowledge have cleared some superstitious believe I have concerning disease/sickness	180	3.5	1.87	Agree
6.	I have discarded some of my behaviors due to some lesson I have had	180	2.6	1.62	Agreed
7.	Biology knowledge makes me aware that some habits will negatively affect my health in my old age	180	3.2	1.71	Agreed
	Grand Mean		**3.18**		**Agreed**

Table II: Knowledge of Effects of Smoking on Healthy Living

S/N	Statements	Number	Mean	Standard Deviation	Decision
1.	I have smoked before	180	2.7	1.64	Agree
2.	Smoking Is not good for one's health	180	3.8	1.92	Agree
3.	The study of biology helps me to understand the implications of smoking to health	180	3.6	1.82	Agree
4.	Smoking can affect the liver	180	3.4	1.80	Agree
5.	Smoking can affect the lungs	180	3.5	1.81	Agree
6.	Smoking can affect the kidney	180	3.5	1.81	Agree
7.	Smoking can affect the heart	180	3.8	1.92	Agree
8.	Smoking can affect the reproductive system	180	2.8	1.67	Agree
	Grand Mean		3.38		

Table III: Knowledge on Skipping Breakfast

S/N	Statement/Items	Number	Mean	Standard Deviation	Decision
1.	I always take breakfast	180	3.17	1.74	Agree
2.	Breakfast makes me bored	180	3.17	1.74	Agree
3.	The study of biology helps me to understand the implication of skipping breakfast to health	180	3.21	1.70	Agree
4.	Balanced diet is very essential to my health	180	3.76	1.92	Agree
5.	Skipping breakfast can lead to obesity	180	1.50	1.21	Disagree
6.	Skipping breakfast can cause lack of concentration and strength	180	3.61	1.85	Disagree
	Grand Mean		**3.0**		

Table IV: Issues on Sedentary Lifestyle

S/N	Statements	Number	Mean	Standard Deviation	Decision
1	I don't like exercise	180	2.87	1.69	Agree
2	I can't spend the whole day playing video game and charting on phone	180	2.53	1.55	Agree
3	Biology lessons have made me understand the effects of exercise ob health	180	3.41	1.84	Agree
4	My biology lessons makes me understand the implications of irregular exercise on health	180	3.65	1.91	Agree

Continuation of Table IV

5	To stay fit and healthy, I need physical exercise	180	3.83	1.95	Agree
6	Lack of exercise can lead to anxiety	180	2.31	1.51	Disagree
7	Lack of exercise can lead to diabetes	180	2.26	1.50	Disagree
8	Lack of exercise can lead to cardiovascular obesity	180	2.81	1.67	Agree
9	Lack of exercise can lead to cardiovascular diseases	180	2.61	1.61	Agree
10	Black of exercise can lead to anxiety	180	2.31	1.51	Disagree
11	Lack of exercise can lead to depression	180	2.73	1.61	Disagree
12	Lack of exercise can lead to colon cancer	180	1.33	1.51	**Disagree**
13	Lack of exercise can lead to kidney stones	180	1.30	1.14	**Disagree**
14	Lack of exercise can affect the immune system	180	3.30	1.81	**Agree**
	Grand mean			**2.8**	

Table V: Knowledge on the Implication of Alcohol

Statements	Number	Mean	Standard deviation	Decision
I have ever taken alcohol before	180	2.89	1.70	Agree
Alcohol is not good for one's health	180	3.86	1.91	Agree
The study of biology helps me to understand the implication of alcohol on health	180	3.91	1.97	Agree
Alcohol taken in excess over a period of time can result in liver breakdown	180	3.22	1.79	Agree
Alcohol can Lead to alteration in brain development	180	2.29	1.51	Disagree
Alcohol can lead to memory problems	180	3.54	1.83	Agree
Grand Mean		**2.7**		

Table VI: Knowledge on the Implication on eating Junk Food

Statements	Number	Mean	Standard Deviation	Decision
I always eat snacks	180	2.14	1.46	Disagree
I take soft drinks a lot	180	1.87	1.36	Disagree
I chew gum always	180	1.84	1.37	Disagree
Biology knowledge helped me to understand the implications of eating snacks to my health	180	3.25	1.80	Agree
Consuming junk food can affect concentration	180	1.97	1.40	Disagree
Consuming junk foods can affect the functioning of the brain	180	2.20	1.48	Disagree
Consuming junk food can cause liver disease	180	2.67	1.63	Agree
Consuming junk food can cause heart disease	180	2.81	1.67	Agree
Junk food and can food can cause obesity in human	180	2.15	1.41	Disagree
Junk and can food can cause diabetes in human	180	3.02	1.71	Agree
Grand Mean		**2.39**		

DISCUSSION

The research findings showed that the biology curriculum is effective in teaching the health needs of the youths. The grand mean for the importance of biology knowledge is 3.18; as indicated in table I. This means that, the respondents agreed that biology is important to health. Biology lessons helps students to understand their body system, clear, some superstitious believes of their negative behaviours and they are now aware that some of their negative health habits will affect their lives in their old age. In spite of what Umeh(1996) claimed that his textbook "College Biology" is written to help prepare students for examinations this study discovered that biology knowledge is not limited to passing examinations alone but impacts the above knowledge to the youth. The findings of the study also agreed with the works of Taylor, Green and Stout (2006) who narrated that, biology knowledge provides comprehensive coverage on human and diseases and human nutrition. Health focus reading usually gives practical information concerning some particular topic of interest, such as proper nutrition and how to prevent cancer. Similarly (Mader, 2001), said that with thinking

scientifically, questions which gives students an opportunity to participate in the scientific process and learn to think critically. The study also pointed out that biology knowledge is important to healthy living. Urebu, (1990) in Adejoh and Hyokeyea (2010) laid credence to this when he said that; biology is important because, it equips the students to comprehend the world around them and equip them with the necessary skills to build a progressive society. The study is also in consistency with Nwosu (2006) in Adejoh and Hyokeyau who observed that biology provides a platform for teaching students the ability to apply learned science concept and principles, solving everyday life problems. Among the cardinal objective of biology programme are;meaningful and relevant knowledge in biology, Ability to apply scientific knowledge to everyday life in matters of personal and community health and agriculture FME, (1995).

The biology curriculum is spiral in nature, making the topic to appear from SS 1-3. Biology, a core course at the SSS can be an effective tool in the maintaining of healthy youth population which is an asset to the nation. A healthy population according to Ityokaa and Adejoh(2011) entails people with sound and productive minds capable of excelling in all aspects of human endeavours. A nation whose populace is affected with high prevalence of debilitating illness will spend all its money in trying to combat the ugly incidence. Biology knowledge teaches youth healthy habits/hygiene. This will ensure good health and prevents certain disease such as diabetes, mental disorder, cancer, high blood pressure, alterations in brain development that may have consequences reaching for beyond adolescence. The research revealed that a lot of the youth ever smoked before; the biology knowledge have help the youth to understand the implications of smoking, having grand mean of 3.38, alcohol grand mean of 2.7, skipping breakfast grand mean of 3.0, sedentary life grand mean of 2.8 while consumption of junk food has a grand mean of 2.39. This means that the consumption of junk and can food has been adequately addressed by the biology curriculum.

CONCLUSION

Equipping young people with knowledge, attitude and skills through education is synonymous to providing a vaccination against health threats. Education for health is an important component of any education and public health programme; it protects young people against threats both behavioural and environmental, complements and supports policy, services and environmental change. Educating young about health is an important strategy for preventing illness, and injury. Educating the youth and adolescence can instil positive health behaviours in the early years and prevent risk of premature death.

RECOMMENDATIONS

The study recommends based on its findings thus;

1. Biology should be taught with human face, using concrete illustrations, explanations and examples
2. Field trips to hospital, old people's homes and juvenile rehabilitation centers/homes should be made part of biology teaching.
3. Concrete and relevant instructional materials such as; preserved or models of infected liver, brains, kidney, heart, lungs etc. should be displayed for students during lessons whenever necessary
4. Pictures and documentaries on obese human beings should be displayed for students
5. The curriculum component on human nutrition should be given adequate coverage by teachers

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