KIU Journal of Social Sciences Copyright©2018
Kampala International University ISSN: *2413-9580*; 4(1): 89–95

Impacts of Teaching of Health Education on the Control of Environmental Hazard in Secondary Schools in Offa Kwara State

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Abstract. Today's children are the leaders of tomorrow, they deserve to inherit a safer, fairer and healthier environment, no task is more important than safe guiding their environment. Health education knowledge are said to be one of the most efficient strategies that a nation needs to prevent environmental hazard like pollution, diseases and accidents in schools. This study investigated the impact of teaching of health education in the reduction of pollution, diseases and accidents in secondary schools in Offa, Kwara State. A descriptive research of survey type was used. The population were all secondary schools' teachers in Offa, Kwara State. Purposive and simple random sampling techniques were used to select 200 respondents that were used for the study. Researchers' designed questionnaire which was validated and tested for reliability using Pearson product moment correlation with a coefficient of 0.75r. Inferential statistics of Chi-Square was used to test the hypotheses at 0.05 alpha level of significance.
The findings of the study revealed that:Teaching of health education reduces pollution, the spread of diseases and accidents in secondary schools in Offa. (calc. X^2 value =181.46 > crit value 21.03), (calc X^2 value =151 03> crit value 21.03), (calc X^2= 121.82 > crit value 21.03)
The study concluded that the teaching of health education reduces pollution, the spread of diseases and accidents in secondary schools in Offa, Kwara State. It is therefore recommended that students and teachers should be given adequate knowledge of health education in order to create a sustainable quality of live to control pollution, the spread of diseases and to prevent accidents within the school environments. Health education knowledge should also be given to control physical, chemical and biological processes which may directly and indirectly affect the wellbeing of students and teachers in schools.

Keywords: Health, Education, School, Pollution, Diseases.

1. Introduction

Today's children are the leaders of tomorrow, they deserve to inherit a safer, fairer and healthier environment. There is no task more important than safe guarding their environment. Health education knowledge are said to be one of the most efficient strategies that a nation needs to prevent environmental health hazard like pollution, diseases and accidents in schools. A school is an institution designed for the teaching of students under the direction of teachers. The school provides learning experiences, services and environment which favourably influence those knowledge practices and also that which promotes individual students life. (Darki and Onobumeh (2014).

According to Arendt (2005), Health education is a continuation of learning experiences that enables students as individuals and as members of society to make informed decisions, modifies behaviours and change social conditions in ways

that are health enhancing and increase health literacy. Farles, (2009), defines health hazard like pollution as any chemical, condition or circumstance that may cause injury or illness. A substance is considered a health hazard if chronic or acute effect may occur in connection with the use of or exposure to that substance

Oxford English dictionary (2015) defines disease as a disorder of structure or function in a human, animal or plant especially one that produces specific symptoms or that affects a specific location and is not simply a result of physical injury. Also by Oxford English Dictionary, (2015) Accident can be defined as an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury.

As a result of advances in technology, today's children will be exposed to more chemicals over their lifetimes than previous generations. That's why teaching of health education is essential for safeguarding their health as well as protecting their health if contamination exists to prevent accidents and diseases, (Feinstein, Sabates, Anderson, Sorha and Hammond, 2006). According to WHO (2002), environmental challenges and opportunities vary considerably among schools around the world across countries and within communities, similarly the resources available to schools to manage health hazards vary and are limited.

BMB (2015) reported that continuous exposure to environmental pollution remains a major source of health risks throughout the world. The problems are undoubtedly greatest in schools where traditional sources of pollution such as industrial emissions, poor sanitation, inadequate waste management, contaminated water supplies and exposure to indoor air pollutions from biomass fuels affect large numbers of students in school environment.

Health Education can impact in two ways; firstly through life-skills based Education (LSBE) which teaches children to learn about health, and secondly through the educational process as a whole which provides skills such as critical thinking and making choices enabling for options for healthy lifestyles, (Minchom, Sibert, Newcombe and Bowley, 2010). According to Derryberry (2004), Health education and health educators are expected to contribute to the reduction of negative impacts of health problems. The unique role of health education in helping to meet these problems can perhaps be clarified through a review of some differences between procedures that have been successful in solving the problems of diseases. Health Education has impact on features of self, particularly, self-concepts and attributes.

According to Feinstein et al (2006) education is strongly linked to health and determinants of health such as health behaviours, risky contests and preventive techniques and services to prevent accidents that is there is a significant impact of health education in the control of accidents. Students who are being taught health education tend to have better health, well-being and healthier behaviours, which prevent the occurrence of pollution. Education is an important mechanism for enhancing the health. And well-being of individuals, *because* it reduces the need for health care (Spasojevic 2003) Kaushal, (2015), affirmed that there is a positive impact of health education on diseases through a study conducted on knowledge of teachers in aspect of reproductive health where significant changes were observed after acquired knowledge of health education

2. Statement of the Problem

In recent time and across the world, there has been outbreaks of pollution which can lead to diseases and report of accidents cases in school environments. It has been observed that there is high rate of pollution, diseases and accidents in schools where is there is inadequate knowledge of Health education. Cases of environmental hazards are more prone to schools where they lack health educators and accident preventive techniques. Despite the major efforts that have been made over recent years to clean up the environment, pollution remains a major problem and poses continuing risks to health and can lead to diseases. In order to establish the importance of health education in school environments in the reduction of environmental health hazards

like pollution, diseases and accidents, this study investigated the impacts of teaching of health education in the control of environmental hazards in secondary schools in Offa, Kwara state.

3. Research Questions

- Will teaching of health education have impact on pollution in secondary schools in Offa, Kwara State?
- Will teaching of health education have impact on diseases in secondary schools in Offa, Kwara State?
- Will teaching of health education have impact on accidents in secondary schools in Offa, Kwara State?

4. Research Hypotheses

- Teaching of health education will not significantly have impact on pollution in secondary schools in Offa, Kwara State
- Teaching of health education will not significantly have impact on diseases in Secondary schools in Offa, Kwara State
- Teaching of health education will not significantly have impacts on accidents in secondary schools in Offa, Kwara State

5. Methodology

A descriptive research of survey type was used for this study. The population for this study comprises all secondary school teachers in Offa, Kwara State. Purposive and simple random sampling techniques were used to select 10 out of 14 public secondary schools in Offa, Kwara State. Simple random sampling technique of fishbowl using 'Yes and No' was used to select 20 teachers from each of the secondary schools making a total of 200 respondents which include male and female teachers. The instrument used for this study was a researchers' structured questionnaire titled "Impacts of Health Education Knowledge on the Control of Environmental Health Hazard in Secondary Schools''. The questionnaire has only 1 section which contains questions relating to the hypotheses set for the study .A modified four point Likert scale rating format type instrument of Strongly Agree (SA) - 4, Agree (A) - 3, Disagree (D) - 2 and Strongly Disagree (SD) – 1 was used

The instrument was validated by three experts in related fields Comments and suggestions were used to improve the final instrument used for the study. The reliability of the instrument was carried out using test re-test method. It was administered to 20 teachers at Government Day Secondary School, Tanke, Ilorin, which has the same characteristics with the selected schools but not part of the study. The data collected in each of the two administrations were correlated using Pearson Product Moment Correlation. A correlation coefficient index of 0.75r was obtained, which is high enough to show that the instrument is reliable for the study.

The questionnaire was administered to the respondents by the researchers and 3 trained research assistants. The data collected were sorted, coded and analysed using spss version 18.0. An inferential statistics of Chi-square was used to test the hypotheses set for the study at 0.05 alpha level of significance.
The following schools are used for the study:
1) Offa Grammar School., 2) St. Claires Girls Grammar school, Offa., 3) Anglican comprehensive school, Offa., 4) Olalomi Comprehensive Grammar school, Offa., 5) Tawakalitu Grammar school, Offa., 6) Nawairudeen Grammar school, Offa., 7) Ansarudeen Grammar school, Offa., 8) Moremi Girls High School, Offa., 9) Okin High School, Offa., 10) Government Secondary School, Offa.

Results

Hypothesis one: Teaching of Health education will not significantly have impact on pollution in secondary schools in Offa, Kwara State

Table 1: Chi-square analysis of impacts of teaching of health education on pollution in Secondary Schools in Offa, Kwara State

S/N	ITEM	SA	A	D	SD	Row Total	DF	Cal- x^2	Cri-x^2	Decision
1	Teaching of Health education in schools will reduce the occurrence of pollution	28	130	40	2	200				
2	Teaching of Health education in schools will give the school community knowledge of pollution	90	66	34	10	200				
3	School community with better understanding of pollution will guide against contamination of water supplies	60	73	60	7	200	12	181.46	21.03	Hypothesis rejected
4	Teaching of health education in schools will reduce poor sanitation that can lead to pollution	64	65	36	35	200				
5	Teaching of health education in schools will control waste management,	52	114	19	15	200				
	Column Total	294	448	189	69	1000				

P≤ 0.05 cal x^2=181.46 > crit x^2=21.03

Table 1 indicates hypothesis 1 which states that teaching of health education will not have a significant impact on pollution in Secondary Schools in Offa, Kwara State. The table revealed that the calculated x^2 value of 181.46 and critical x^2value of 21.03 with 12 degree of freedom at 0.05 level of significance, since the calculated x^2 value is greater than the critical x^2 value hence the hypothesis is rejected. This implies that teaching of health education has a significant impact on pollution in secondary schools in Offa, Kwara State.

Hypothesis two: Teaching of health education will not significantly have impact on diseases in Secondary schools in Offa, Kwara State

Table two: Chi-square analysis of impacts of teaching of health education on diseases in secondary schools in Offa, Kwara State

s/no	ITEM	SA	A	D	SD	Row Total	DF	Cal- x^2	Cri-x^2	Decision
1	Teaching of health education in schools will help the School community to safeguard their environments and minimize the outbreak of diseases	42	80	60	18	200				
2	Teaching of health education in schools will help the School community to practice healthy behaviours	62	92	40	4	200				
3	Teaching of health education in schools will help in the control of diseases within schools' environments	51	120	16	13	200	12	151.03	21.03	Hypothesis rejected
4	Teaching of health education in schools can help in early detection and treatment of infections	40	142	7	11	200				

5	Teaching of health education in schools will help school community to embrace hygiene	60	122	13	5	200
	Column Total	225	556	136	51	1000

P≤ 0.05 cal x^2=151.03 > crit x^2=21.03

Table 2 indicates hypothesis 2 which states that teaching of health education will not have a significant impact on diseases in Secondary Schools in Offa, Kwara State. The table revealed that the calculated x^2 value of 151.03 and critical x^2value of 21.03 with 12 degree of freedom at 0.05 level of significance, since the calculated x^2 value is greater than the critical x^2 value hence the hypothesis is rejected. This implies that teaching of health education has a significant impact on diseases in secondary schools in Offa, Kwara State.

Hypothesis three: Teaching of health education will not significantly have impact on accidents in secondary schools in Offa, Kwara State

Table three: Chi-square analysis of impact of teaching of health education on accidents in Secondary Schools in Offa, Kwara State.

S/N	ITEM	SA	A	D	SD	Row Total	DF	Cal- x^2	Cri-x^2	Decision
1	Teaching of health education in schools will help in the control of accidents	80	63	40	17	200				
2	Teaching of health education in schools will help to guide against risky contests that can lead to accident	84	72	31	13	200				
3	Teaching of health education in schools will equip the school community the knowledge of preventive techniques	62	80	30	28	200	12	121.82	21.03	Hypothesis rejected
4	Teaching of health education in schools will broaden their knowledge to avoid physical injury	30	88	80	12	200				
5	Teaching of health education in schools will help to manage the limited resources available for accident victims	40	130	20	10	200				
	Column Total	296	433	207	80	1000				

P≤ 0.05 cal x^2=121.82 > crit x^2=21.03

Table 3 indicates hypothesis 3 which states that teaching of health education will not have a significant impact on accidents in Secondary Schools in Offa , Kwara State. The table revealed that the calculated x^2 value of 121.82 and critical x^2value of 21.03 with 12 degree of freedom at 0.05 level of significance, since the calculated x^2 value is greater than the critical x^2 value hence the hypothesis is rejected. This implies that teaching of health education has a significant impact on accidents in secondary schools in Offa, Kwara State.

6. Discussion

Teaching of health education has a significant impact on pollution in secondary schools in Offa, this finding is in agreement with Spasojevic (2003) who reported that Students who are being taught health education tend to

have better health, well-being and healthier behaviours, which prevent the occurrence of pollution, which means that health education has a positive impact on pollution. Education is an important mechanism for enhancing the health and well-being of individuals, *because* it reduces the need for health care.

Teaching of health education has a significant impact on diseases in secondary schools in Offa, this. This finding corroborates with the submission of Kaushal, (2015), who that affirmed that is a positive impact of health education on diseases through a study conducted on knowledge of teachers in aspect of reproductive health where significant changes were observed after acquired knowledge of health education .It is also in line with the reports of Derryberry (2004),who stated that Health education have been successful in solving the problems of diseases through a clarified review of some differences and procedures.

Teaching of health education has a significant impact on accidents in secondary schools in Offa ,this is in agreement with the report of Feinstein et al (2000) who affirmed that education is strongly linked to health and determinants of health such as health behaviours, risky contests and preventive techniques and services to prevent accidents, that is there is a positive impact of health education in the control of accidents.

7. Conclusions

Based on the findings of this study, it was concluded that the teaching of health education reduces pollution, spread of diseases and accident in secondary schools in Offa, Kwara State. Students who are being taught health education have better health, awareness on prevention of diseases and control of pollution.

8. Recommendations

It is therefore recommended that students and teachers should be given adequate knowledge of health education in order to create a sustainable quality of life to control pollution, spread of diseases and to prevent accident within the school environment. Health education knowledge should also be given to control physical, chemical, biological contamination processes and factors which may directly and indirectly affect the wellbeing of students and teachers in schools.

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